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ABSTRACT

This document, one in a series developed to provide technical assistance to 22 Long-Term Care Gerontology Centers, addresses the application of evaluation procedures within centers and their component programs and projects, including: (1) interdisciplinary education and training; (2) service and practice model development; (3) research; (4) technical assistance; and (5) information dissemination. The literature review discusses methodological, political and ethical obstacles facing center evaluation, followed by an examination of the state of long-term care data and examples of the systemization of data into management information systems. The last section reviews literature on the practical application of evaluation research and program evaluation. An extensive annotated bibliography is also provided. (RC)

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PROGRAM EVALUATION AND EVALUATION RESEARCH: THEORY, ISSUES AND APPLICATIONS USEFUL IN LONG TERM CARE GERONTOLOGY CENTERS

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Volume 4 in a Series:

Selected Topics in
Long Term Care

September, 1980

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Selected Topics In Long Term Care

Volume 4

Program Evaluation and Evaluation Research: Theory, Issues and Applications Useful In Long Term Care Gerontology Centers

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Long Term Care Gerontology Group

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PREFACE

This document is one of a series developed by ELM Services, Inc. and a group of special consultants under Administration on Aging contract HEW-105-79-3008, a contract to provide technical assistance to twenty-two Long Term Care Gerontology Centers. The series, entitled Selected Topics in Long Term Care, contains five monographs with annotated bibliographies and additional resources. They are:

Volume 1: Models for Service Delivery for Long Term Care: An Introduction to the Literature, with an essay by Rosalie A. Kane, D.S.W. and Robert L. Kane, M.D.

Volume 2: Adult Daycare Services: An Introduction to the Literature with an essay by Richard A. Kalish, Ph.D.

Volume 3: Financing Long Term Care, with essay and bibliography by Jay Greenberg, Sc.D. and David Doth, M.A.

Volume 4: Program Evaluation and Evaluation Research: Theory, Issues and Applications Useful in Long Term Care Gerontology Centers, with an essay by David J. English, D.B.A. and Celia Berdes, M.S.P.H.

Volume 5: Education and Training Resources for Long Term Care Gerontology Centers, with an essay by Tom Hickey, Dr.P.H.

Each of the identified topics in the monograph series is integral to the Centers' basic mission of enhancing knowledge in long term care through policy research, increasing manpower in gerontology/-geriatrics, and/or providing technical assistance to communities in their regions.

The mandate of Long Term Care Gerontology Centers has been expressed by the Commissioner of the Administration on Aging, Robert Benedict:

> Comprehensive designation will be a recognition that these few centers have achieved a critical mass of intellectual talent, of community linkages, and of programmatic development across a wide variety of disciplines. Designation will serve as a measure of accomplishments pointing to these "centers of excellence" as those few institutions which are comprehensive programmatically in research, education and training, foremost in the creation of service laboratories

where assessment schemes, training and care with a multidisciplinary approach can be mounted, and in the development of key ties to community sites and service configurations.

Comprehensive gerontology centers will develop training teams, a cadre of experts to provide the nation and their regions with manpower through inter-disciplinary education and training efforts and continuing education programs.

They will develop research endeavors covering policy research, organizational design, human service system integration, economics and the whole range of validated assessment and evaluation tools we will need. They will include an emphasis on our data needs for the future.

Moreover, these centers will show strong linkages to communities and to the community service systems. Hand in hand, centers will provide the knowledge and technical assistance base for communities and especially community demonstrations.[1]

These Selected Topics in Long Term Care were chosen as the result of a survey of Long Term Care Gerontology Center directors conducted in the spring of 1980. Their focus was further refined at a conference which convened a team of experts in long term care and Long Term Care Gerontology Center grantees at Thousand Islands, New York in August of that year. (A list of conferees is included as an appendix.) The objective of both processes was to meet the needs of the twenty-two centers for guides to the state-of-the-art in key areas. The more general utility of the documents reflects the process by which they were created.

Participants in the Thousand Islands conference were asked to review an initial draft of a literature search and to apply their critical comments and knowledge of resources to the content and format of the documents. The mission presented to attendees was to assist in the creation of "functional" documents which could provide centers with both an overview of the theory surrounding a specific topic and a practical guide of "how-to" information.

Consultants and grantees initially discussed the specific information needs of Center grantees. Much of this discussion

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[1] From a speech before Long Term Care Gerontology Center grantees, February 1, 1980.

focused on the definition of the five topic areas and how information about them could be organized and presented to be of maximum use to the reader.

Each topic was then addressed by the conferees in general session. Specific subtopics were defined and further clarified in small working groups. Thus, by the end of the third day of the conference, the issues in each of the five topic areas had been identified and an approach to the presentation had been established.

The Conferees next dealt with subtopic areas, specifying key citations and fugitive information difficult to obtain but essential to an understanding of the state-of-the-art. In addition, they noted resource persons and organizations who, in the absence of literature, could provide key insights into each of the topics.

Subsequent to the Conference, ELM sought out and acquired the additional literature highlighted at the conference. In an attempt to provide the most current and advanced resources, the majority of the material cited is dated post-1975. Literature dated before that time has been cited if considered to be of special interest to centers. It has not been the intent of ELM to produce all-inclusive bibliographies, rather, the bibliographies have highlighted those portions of the literature whith appear to related to center functions or information needs.

ELM also asked individual consultants to utilize the collectively developed outlines to prepare state-of-the-art essays for each topic. These essays are intended to serve as guides to the literature.

An "Additional Resources" section has been developed by the ELM staff for four of the five monographs; the financing monograph is self-contained. Within these sections, resource persons have been identified, relevant organizations and associations have been listed, and additional bibliographies have been cited.

The resource persons have been identified through the collaborative efforts of project consultants and staff, by the extent of an individual's contribution to the literature, and finally, when agreements to be included as a resource person could be secured from the individuals themselves. The lists of resource persons are thus by no means exhaustive.

It is not intended that the role of resource persons will be to respond to every question germane to their stated field of specialization. Rather, they are to be utilized with discretion by the directors and staffs of Long Term Care Gerontology Centers when further direction or insight cannot be obtained through the literature or more readily available resources. Careful consideration should be given to the nature of a request and the time necessary to respond to that request. It should also be noted

that many of the resource persons are available for professional consultation.

A separate volume was developed (for distribution to Long Term Care Gerontology Centers only) consisting of single copies of selected articles. Articles have been selected for inclusion based on the significance of their contribution and the relative difficulty in obtaining copies. Readers may be able to obtain copies of these articles by contacting the centers. ELM also has copies of the majority of articles on file and may be able to provide single copies. A list of Long Term Care Gerontology Centers as of this date has been provided as an appendix.

ELM would like to express its appreciation for their assistance in the production of this series to all the attendees of the Thousand Islands conference. Deep appreciation must also go to Thomas Aschenbrener, the Project Officer on this technical assistance contract, for his assistance and supportive stance on innumerable occasions. Finally, ELM would like to express its appreciation to research staff members Celia Berdes, Kathleen Grady, Molly O'Connell Hart, Jane Armbruster-Hu and Patricia Berger-Friedman for their dedication and perseverance on this project.

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Project Director

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Co-Project Director

SECTION I

INTRODUCTION

A. LONG TERM CARE GERONTOLOGY CENTERS

The choice of evaluation as one of the topics in the "Literature for Long Term Care Gerontology Centers" was a fortuitous one for many reasons. Any new program, and especially one with the ambitious scope and scale of the Long Term Care Gerontology Center Program, does well to make itself informed early in its development about the nuts and bolts of evaluation. There are five reasons to heed this "evaluation imperative."

First, evaluation can provide the program with the information necessary to meet accountability requirements of the funding source. Second, evaluation can assist the program to meet the needs for information about the impact of the program in the community, thus providing local accountability. Third, evaluation provides information to staff about program effectiveness, thus leading to modifications, for example, in target groups or services. Fourth, evaluation provides information for management decision-making. Finally, knowledge about evaluation methodology can give a program insights into how existing evaluation methods must be modified to fit the scope of the program.

This monograph deals with evaluation applications within Long Term Care Gerontology Centers and their component programs and projects. These components include:

- Interdisciplinary Education and Training

  The Long Term Care Gerontology Centers will serve as learning laboratories for educating future health and social service professionals, and others, in the specific skills needed to serve the chronically ill and functionally impaired elderly. Much of the education and training shall be of an interdisciplinary nature, and it will be both didactic and experiential. It is envisioned that Long Term Care Gerontology Centers will also be centers of excellence for the provision of regular offerings of continuing education programs, primarily for practicing physicians, nurses, and social workers.

- Service and Practice Model Development

  Through linkages with major health and social service providers in the community, it is expected that centers will be able to serve or arrange for services to samples of chronically ill and functionally impaired elderly that will meet their health and social service needs. It is expected that centers will develop and test models of comprehensive assessment and case management.

- Research

  A Long Term Care Gerontology Center will provide many opportunities for the interdisciplinary study of the prevention and treatment of chronic disease, new and innovative approaches to the delivery of health care and social services, methods of rehabilitation, and case management of the chronically ill and functionally impaired older person. In addition, it is anticipated that centers will undertake policy-related research including the planning, organizing, delivery, and evaluation of health and social services for the functionally impaired elderly.

- Technical Assistance

  It is anticipated that a Long Term Care Gerontology Center will serve as a regional and national resource for technical assistance to: Federal, State and local governments, service agencies and institutions, and universities and other institutions of higher education. Technical assistance should be provided to these groups for purposes of developing and/or evaluating their educational, research, or comprehensive services programs for the chronically ill and functionally impaired elderly.

- Information Dissemination

  The Long Term Care Gerontology Center is expected to disseminate new knowledge regarding chronic illness and functional impairment in the elderly. Information regarding available services, the need for early evaluation and intervention, techniques of self-care, maintenance of independent living and the like should be made available to elderly persons and their families and friends, volunteers, students and others who may have need for this type of information.[1]

This monograph surveys evaluation literature that is relevant to Long Term Care Gerontology Centers. A special effort has been made to include relevant examples that cut across all component parts of the Long Term Care Gerontology Center.

[1]Administration on Aging, OHDS, DHHS. Guidelines for Preparation of Grant Applications: Long Term Care Gerontology Centers U.S. Government Printing Office, 1980, p.9-11.

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B. DISTINCTION BETWEEN TERMS

The terms "evaluation," "program evaluation," "evaluation research," "non-evaluative research," and "research" are used by different authors to connote both somewhat similar and somewhat distinct concepts. This monograph makes the following distinctions among them:

- "non-evaluative research" and "research" are terms used synonymously to mean careful and systematic inquiry or examination aimed at increasing understanding and seeking new knowledge (i.e., to establish facts or principles).

- "evaluation" is systematic effort to determine the worth of or to appraise the status of a system and assess the effects of its operation.

- "evaluation research" is the means of appraising or examining the worth of programs across various settings, whereas "program evaluation" is the appraisal from single setting studies (Nicholas, p.27).

The information developed from evaluation is used in making decisions about the worth of a program (degree to which goals are attained), or to provide data that can be used to improve the overall program (Glaser and Backer, 1972). Kane et al (1979) point out that "most program evaluations will reveal imperfect success in accomplishing objectives and subobjectives. Evaluation does more, however, than demonstrate the amount of achievement. It pinpoints areas where problems exist."

The distinctions among "evaluation," "program evaluation" and "evaluation research," are subtle and inconsistent across the literature. For purposes of this monograph, however, the artificial distinctions indicated above will be utilized. The distinction between "evaluation" and "research" is especially important because research seeks knowledge for knowledge's sake, whereas evaluation seeks knowledge in order to appraise. When speaking of evaluation in the broader sense, including both evaluation research and program evaluation, the term "evaluation" will be utilized. Only when the very narrow definition as given above is intended will the terms "program evaluation" or "research evaluation" be utilized.

C. COMMON PROBLEMS IN EVALUATION

Evaluators in Long Term Care Gerontology Centers will face obstacles of greater complexity than those of most interdisciplinary centers. This is because the programs are so diverse and could potentially have impact at a very large number of levels. These potential levels of impact include:

- the university
- the medical school
- Federal, state and local governments
- the colleges within the university
- various departments within the university
- other centers and institutes within the university
- faculty
- students from various departments and colleges and at all levels
- training sites
- service sites
- community health and social service organizations and system
- the "aging network"
- the elderly
- the families of the elderly

Unlike many centers, which cut across two or three departments, the Long Term Care Gerontology Centers could cut across almost the entire university. Therefore, the problems facing Long Term Care Gerontology Center evaluation experts are more complex than the problems of the evaluator of less complex systems with fewer components. These problems include:

- The center may lack established or well-defined goals, objectives or programmatic structure.

- Distinguishing between center activities and either university or service demonstration activities is very difficult, especially deciding those activities which caused the impact. For example, where the university had interdisciplinary gerontology educational programs prior to the center's development, how does one measure whether a new interdisciplinary program is due to the impact of the Long Term Care Gerontology Center or the pre-existing program?

- Many of the students in the Long Term Care Gerontology Center Programs will be in training for between three and five years. Therefore, only a small percentage of the total will have completed training and be actively involved in the field. It is thus too early to assess impact on the career patterns of the more recent students, as they are still in the "educational pipeline." (See, for example, an assess- ment of the National Area Health Education Center program, 1980.)

- There may be ethical or fiscal constraints on evaluation methodology.
- The evaluator may be brought into the program too late for baseline data collection or prospective evaluation design.
- Evaluation results may not be available when decisions about program changes are made.
- Program staff may be resistant and uncooperative and the program director may be less than enthusiastic.
- There may be lack of clarity about the role of the evaluator (Hargreaves et al, 1974-1975).
- There may be difficulty in making evaluation data relevant to specific management decisions.
- Established methods for evaluating the effectiveness of specific service techniques may be lacking.
- There may be technical problems in developing and maintaining a useful management information data base.
- There may be variations in common definitions and nomenclature.

D. TYPES OF EVALUATION

Various authors have delineated many categories of evaluation. Among these are:

- Outcome, Process, Structure (Donabedian, 1969)
- Process and Impact (Roos, 1975)
- Process and Product (Meleis & Benner, 1975)
- Formative and Summative (Weiss, 1972)
- Assessment of Effort, Effect, and Process (Suchman, 1967)
- Input, Outcome, Process, Structure (Tien, 1979).

Of these, Donabedian's outcome, process, and structure typology is probably the most widely used. Users vary the terms, but the meaning is the same. Interdisciplinary centers of a variety of types, as well as federally funded research and education programs, have found these categories useful. It is the authors' recommendation that these categories be used by the Long Term Care Gerontology Centers as a format for developing their evaluation and standardizing it with other centers:

- Outcome Evaluation (End Results*, Product*, Impact*) measures changes identified as the result of specific program interventions. For example, with regard to the outcome of a service demonstra- tion, the status of a client after service could be evaluated through measures of patient satisfaction, degree of dependence, or functional and psychological status.

- Process Evaluation is the study of what professionals do, and how they behave as they interact (see Donabedian, 1978). This would include examining the way the center and its staff make decisions, how the planning process is employed, how service is delivered in the demonstration, and how courses are taught.

- Structure (Resource*) Evaluation is the study of the settings in which the activities of the center take place and the instrumentalities of which it is a product. "It is concerned with such things as adequacy of facilities and equipment; the qualifications of ... staff and their organizations; the administrative structure and operations of programs and institutions providing care; fiscal organization and the like." (Donabedian, 1969).

Meleis and Benner (1975) recommend Product (Outcome) Evaluation:

- when it is essential to compare the outcomes of different programs

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* Other terms used in the literature.

- when the program is sufficiently developed to warrant testing
- when variables are well delineated and it is feasible to control for extraneous variables and unforeseen changes while the data evaluation is being conducted
- when the question of whether or not a program should be continued is being considered;

and they recommend Process Evaluation:

- when a short-term project is being evaluated
- during the early developmental stages of any innovation
- when qualitative and quantitative information is needed to guide decision-making in implementing an ongoing project
- when post-evaluation recommended changes could be further implemented and tested in an ongoing process
- when unobtrusive measures are warranted for faculty and student acceptance
- when the program itself and the value to the subjects of changing or enriching it are seen as more important than a well-controlled experimental design.

Most often, evaluation efforts try to include both product and process measures.

E. CONCEPTUAL MODEL FOR EVALUATION OF LONG TEPM CARE CENTERS

Fink and Kosecoff (1980) in their newsletter on "How To Evaluate Health Programs" list nineteen evaluation guidelines for "Planning an evaluation you'll be proud of." Using these guidelines, each Long Term Care Gerontology Center should be able to develop an Evaluation Plan. This plan must be dynamic and able to meet the needs of a variety of users. This section proposes a conceptual evaluation model around which centers can develop their evaluation plans.

The proposed conceptual model integrates four essential components or dimensions of evaluation. As illustrated in Figure 1, these components are:

- Impact Point
- Evaluation Category
- Evaluation Variables
- Type of Evaluation.

Figure 2 illustrates how this conceptual model would fit together and could become part of an evaluation plan. For each item listed in Figure 2, at least one research question and one hypothesis would previously have been listed. In addition, the research design (whether experimental or quasi-experimental), evaluation instruments, data collection and quality control activities, and analysis plan would have been defined.

Having developed the evaluation plan, the following questions should be asked before implementing the plan.

1) Is this evaluation approach adequate?
2) Is the analysis presented adequate, and will it demonstrate impact?
3) What is an appropriate control population against which to compare data? Is an outside control population necessary?
4) Is there additional information that could be collected to make evaluation more comprehensive?
5) Would a reasonable person feel that this evaluation approach is appropriate?
6) How can we convince our scientific colleagues that this evaluation approach is the valid and appropriate approach in this kind of a demonstration project?

Section II of this monograph deals with many methods of evaluation relevant to Long Term Care Gerontology Centers and touches on some of the methodological, political and ethical obstacles that may be encountered. Section III deals with operationalizing evaluation, especially with respect to management information systems. Finally, Section IV offers specific case studies of evaluation which may provide analogues for Long Term Care Gerontology Center evaluation.

FIGURE 2. Conceptual Model for Evaluation of Long Term Care Centers

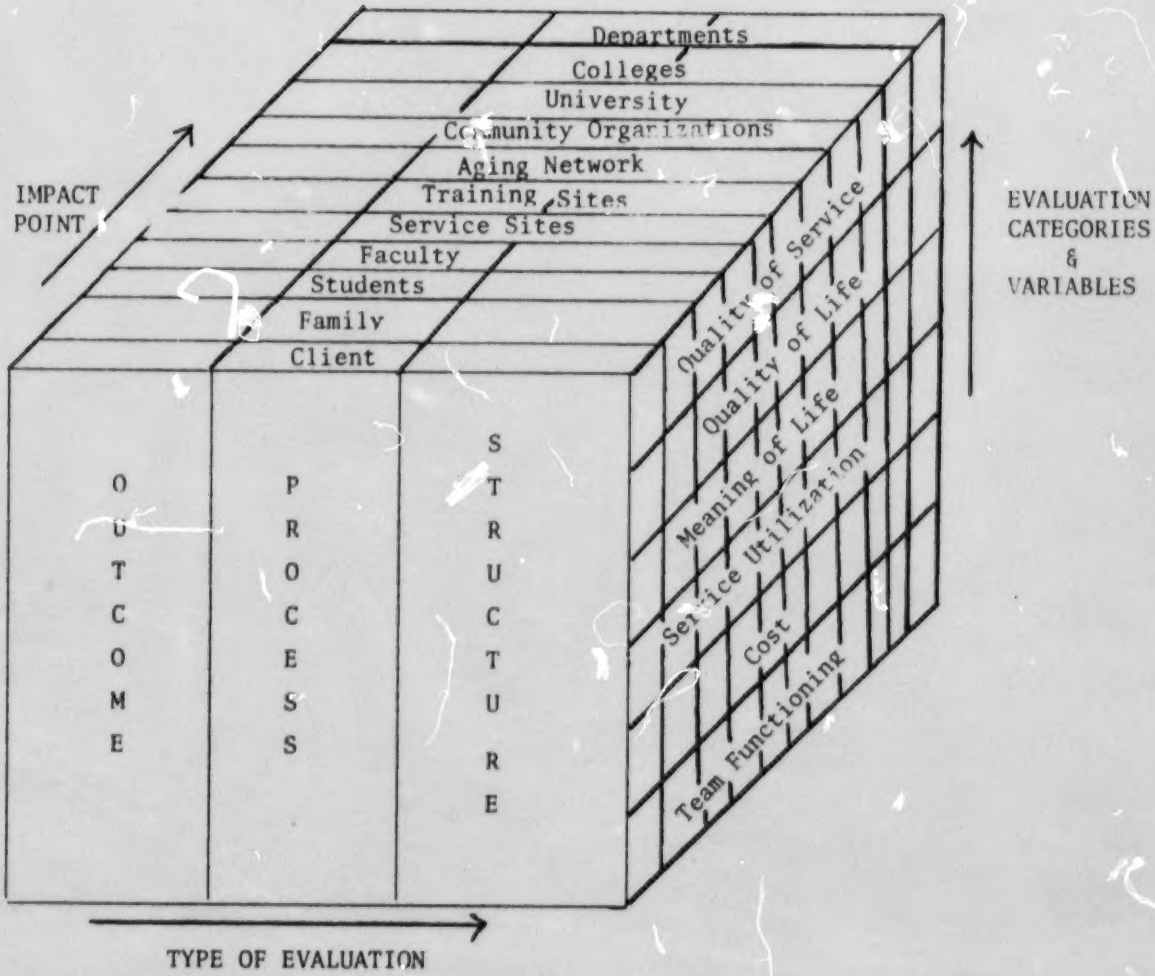

FIGURE 2

IMPACT POINT: Family & Other Support Mechanism

COMPARISON CATEGORIES	EVALUATION VARIABLES	TYPE OF EVALUATION
Quality of Care of Patients	Family Impression of Care	Outcome
Quality of Care Family & Support	Family Satisfaction	Outcome
	Services Needed and Provided	
Quality of Life	Spouses Condition	Outcome
	Psychological Status of Family Member	Outcome
	Absenteeism from Work	Outcome
	Utilization of Medical Services	Process
Meaning of Life	Attitude Toward Own Life	Outcome
Costs & Expenditures	Total Direct Expenditures	Outcome
	Out of Pocket Expenditures	Outcome

IMPACT POINT: Client

EVALUATION CATEGORY	EVALUATION VARIABLES	TYPE OF EVALUATION
Quality of Service	Client Satisfaction	Outcome
	Achievement of Client Goals	Outcome
	Service Needed and Provided	Process
	Family Participation	Process

FIGURE 2 - Continued

EVALUATION CATEGORY	EVALUATION VARIABLES	TYPE OF EVALUATION
Quality of Life	Functional Status	Outcome
	Activities of Daily Living	Process
	Patterns of Appetite and Sleep	Process
	Psychological Status	Outcome
	Amount of Institutionalization	Outcome
Meaning of Life	Attitude Toward Own Life	Outcome
Service Utilization	Services Needed and Provided	Process
Cost and Expenditure	Total Patient Care Direct Expenditure	Outcome
	Out of Pocket Direct Expenditure	Outcome

IMPACT POINT: Faculty/Demonstration Staff

EVALUATION CATEGORIES	EVALUATION VARIABLES	TYPE OF EVALUATION
Quality of Life	Job Satisfaction	Outcome
	Stress Management	
	Professional Involvement	
Meaning of Life	Attitude Toward Own Life	Outcome

IMPACT POINT: Service Site

FIGURE 2 - Continued

EVALUATION CATEGORIES	EVALUATION VARIABLES	TYPE OF EVALUATION
Team Functioning	Cohesion Leader Support Expressiveness Independence Task Orientation Leader Control Interdisciplinary Function	Process
Costs of Operation	Expenses Incurred to Provide Service	Outcome

IMPACT POINT: Medical/Health Professional

EVALUATION CATEGORIES	EVALUATION VARIABLES	TYPE OF EVALUATION
Utilization	Physician Attitudes Physician Referrals	Outcome

SECTION II

ISSUES AND DESIGN IN IMPLEMENTATION

A. METHODOLOGICAL ISSUES

1. Introduction

The major obstacles facing evaluation in centers are methodological, political and ethical. Part A of Section II deals with methodological problems; Part B deals with political and ethical ones.

This literature review attempts to find succinct answers to the following questions about the methodology of design and implementation of evaluations by Long Term Care Gerontology Centers:

- How can a center be functionally evaluated given its multiple objectives?
- How does the elapsed time from the founding of the center impact the evaluation?
- How often should data be collected to tap change in a frail population?
- How should respondent burden be dealt with?
- What are the practical problems in collecting reliable and valid data from impaired older persons?
- How is individual treatment effect identified when there are multiple services and multiple service sites?
- How can cohort effect be distinguished from individual change?
- To what extent does the Hawthorne effect invalidate findings? objectives?
- How can dropout and mortality be handled, for example, in longitudinal studies?
- How is information handled from proxy informants? (e.g., who is the appropriate proxy informant?)
- How can case-study and qualitative data be incorporated?
- What types of statistical and analytical techniques are appropriate in Long Term Care Gerontology Center evaluations?

The most valuable sources of information to address these questions were, not surprisingly, texts in evaluation and evaluation research. Perhaps the most valuable were Suchman (1967) and Weiss (1972).

Another valuable resource was Ellen B. Gold, who, under the sponsorship of the National Institute of Mental Health (1975), recently analyzed twenty-five works on evaluation research. She divided these into the following categories:

- Background, definition, and purpose of evaluation
- Issues and problems in evaluative research
- Evaluation resources: funding and staffing
- Administration of evaluative studies (the role of the evaluator)
- Formulation of goals and measurement of outcome
- Evaluation design and methodology
- Practical implications of evaluation research
- Use of findings
- Implications for training and social research
- Programs and evaluations in health and mental health
- Programs and evaluation for social and economic problems.

Gold has also devised a matrix to indicate which documents or parts of documents are relevant to each topic area; she has also rated each reference. This article will be invaluable to those wishing to read more in the area of evaluation.

Discussions of evaluation in research and evaluation journals are generally extremely sparse and repetitive in their treatment of these methodological issues. A stark contrast was the recent article by James N. Tien (1979), entitled "Toward a Systematic Approach to Evaluation Design". Tien reviews the broad field of program evaluation and attempts to systematize and synthesize the steps necessary to develop valid and comprehensive evaluation designs. He defines the elements of his conceptual framework:

> "First, a design framework is identified which links program characteristics to design elements to an expanded set of threats to validity. Second, the various design elements are grouped into five systematically convenient components, including test hypothesis, selection scheme, measures framework, measurement methods, and analytical techniques. Third, it is proposed that the different types of evaluation can be contained in an evaluation taxonomy composed of eight measures-related classifications. Finally ... a basis for further discussion of a systematic approach to program evaluation is provided."

Tien describes twenty threats to validity. Those threats include:

- Threats to internal validity
  - Extraneous events
  - Temporal maturation of subjects or processes
  - Design instability
  - Pre-test experience

- Instrumentation changes
- Regression artifacts
- Differential selection (as opposed to random selection)
- Differential loss (mortality of subjects)
- Selection-related interaction

- Threats to external validity
  - Pre-test intervention and interaction
  - Selection-intervention interaction
  - Test sensitivity (including Hawthorne and placebo effects)
  - Multiple intervention interference

- Threats to construct validity
  - Intervention sensitivity
  - Measures sensitivity

- Threats to statistical conclusion validity
  - Extraneous sources of error
  - Intervention integrity

- Threats to conduct conclusion validity
  - Design complexity
  - Political infeasibility
  - Economic infeasibility

Tien then discusses a variety of evaluation designs, including true experimental design and quasi-experimental designs; he also discusses the impact of threats to validity on each of these designs. In addition, Tien describes issues pertaining to measurement methods, including:

- Measurement time frame
- Measurement scale
- Measurement instrument
- Measurement procedures
- Measurement samples
- Measurement quality
- Measurement steps.

Additional sources of information are briefly reviewed below. For convenience, they are divided into categories dealing with:

- Threats to validity
- Evaluation Design
- Measurement and analytical techniques
- The Evaluator.

2. Threats to Validity

A number of documents may prove helpful to the evaluator concerned about threats to the validity of his results. For example, Peter Sainsbury (in Zusman and Wurster, 1975) gives practical examples of problems encountered in the evaluation of a community psychiatric service. Although the service was part of the National Health Service in Great Britain, the discussion could prove quite useful. Among the topics he briefly discusses are epidemiological indexes, measures of burden on the family, and practical problems of validity (including what questions can or cannot be asked a family member). In addition, he lists measures used in defining family problems, patient behavior, family burden, type of social service provided, and outcome of psychogeriatric patients.

Perhaps a more succinct discussion of respondent burden is found in the National Center for Health Services' (1979) summary of the 1977 Williamsburg Conference. Papers by Bradburn and by Rothwell and Bridge discuss such issues as:

- the optimal length of interviews
- the amount of effort required of respondents
- the amount of stress on respondents
- the frequency with which the respondent can be reinterviewed
- measuring respondent burden
- recommendations for reducing respondent burden.

Suchman (1967) points out that validity is "by far the most important single methodological criterion for evaluating any measuring instrument". He distinguishes the following types of validity: face validity, consensual validity, correlational or criterion validity, and predictive validity. He then discusses factors affecting validity and the tests of validity. He concludes that the best one can do is to attempt to increase validity by determining the degree of validity present, eliminating sources of invalidity, increasing those factors which tend to produce unbiased measurements, and providing for corrections to sources of invalidity if possible.

3. Design

An early but important overview of evaluation design is that of Weiss (1972). She discusses experimental design and its problems, including a lack of individuals for control groups, mortality of participants in the study, contamination of the control group and the treatment group and changing economic or political climate.

"The basic issue is one of fitting the research design to the purpose of the study. Experimental design is an elegant way to find out how well a particular program achieves its goals. If that is the issue, the experiment is the optimal design. If the program manager wants to know something else entirely - what the needs are in the area, how to develop a new program, how to secure acceptance, or how to set up and implement the program - he should look to other kinds of applied research, rather than evaluation. The essential requirement for the true experiment is the randomized assignment of people to the programs."

Weiss discusses the following quasi-experimental designs: time series designs, multiple time series, and non-equivalent control groups. This is followed by a discussion of the non-experimental designs for beforeand-after study of a single program, after study of only program participants, or after study of only participants and non-random "controls". Weiss points out that the inherent weakness of quasi-experimental designs is that "they fail to control for many of the rival explanations (that observed changes were caused by something other than the program). At their best they can be full of detail and imagery, provocative and rigid insight. If the data are collected with care and system, they offer more information than what would have been available without any study at all."

Boruch et al (1979) have summarized their findings on a feasibility of randomized tests for planning and evaluating local programs. Their test case dealt with homemaker services for the elderly as an alternative to long term care. In addition, they discuss the constraint that randomization places on the feasibility of conducting the study. They point out that "the main purpose of the randomized assignment... is to guarantee that the program participants are equivalent to nonparticipants in the long run, and, consequently, that comparison of the two groups will be as fair and as unequivocal as possible."

4. Measurement and Analytical Techniques

Martin Bloom (in Sherwood, 1975) analyzes some test and measurement instruments used in the screening, diagnosis, and evaluation of outcome in long term care for individuals. He then discusses measurement procedures used within the following major goals of long term care:

- Mortality/survival
- Physical function
- Mental function
- Affective function

- Social and interpersonal function
- Environmental function.

With regard to statistical data and analytical techniques for the evaluation, a most valuable resource is Parker (1979) entitled, "Statistical and Other Data Analytic Techniques for the Evaluation Researcher: An Identification, Classification, and Description of Methods and Resources." The author has identified and categorized statistical and other data analytic techniques which should be of use to the long term care evaluator. In addition, he referenced currently available resources that discuss these techniques. Dr. Parker produced tables of resources in the following relevant areas:

- General Resources on Evaluation Research/Program Evaluation and Social Research
- Resources Relevant to the Pre-Data Analytic Steps of the Evaluation Research Paradigm
- Multiple Variate Statistical Data Analytic Techniques
- Resources Relevant to Simple (Univariate) Statistical Analysis (descriptive statistics, inferential statistics, and non-parametric statistics)
- Resources Relevant to Multi-Variate Statistical Data Analytic Techniques (including analysis of variance, regression and correlation/causal analysis, A.I.D. discriminant analysis, canonical correlation, cluster analysis, factor analysis, ANCOVA and/or MANCOVA and resources relevant to miscellaneous data and analytic techniques such as cohort analysis, nominal data analysis, ordinal data analysis and ecological analysis.

Due to its organization, coverage and specificity, this review article should be of great value to new evaluators.

Finally, Calsyn, Fergus, and York (1977) discuss how interrupted time series analysis was used to evaluate programs for the elderly when random assignment to experimental and control groups was not possible. They provide examples of how to use time series analysis for evaluating programs and institutions in community settings as well as post-hoc analysis of social policy changes. Interrupted time series analysis is a method where

> "the researcher makes multiple assessment of the outcome (dependent) variable prior to the introduction of a treatment in order to establish a baseline for comparison. Then the treatment (independent) variable is introduced and followed by additional assessments of the dependent variable to see if the treatment altered the baseline pattern of the dependent variable in terms of either slope or mean level. A control group is not

essential, although the use of a control stengthens the conclusions which can be made from time series analysis."

Experimental (i.e., randomized) evaluation is obviously a highly desirable objective for Long Term Care Gerontology centers. However, time-series analysis could have far-reaching implications for the evaluation of Long Term Care Gerontology Centers in cases where randomized evaluation is not feasible.

5. The Evaluator

One of the more controversial issues that arise in this field is who should do the evaluation. Purists insist that a disinterested objective evaluator not part of the program itself should be responsible for the evaluation. Much program evaluation and evaluation research has been criticized on the sole grounds that the person evaluating the program is a staff person of the program. It has been pointed out that the in-house evaluator is more likely to become involved with the program development, thus confounding evaluation results. However, it is the experience of the authors of this paper (who have served many times as outside evaluators) that programs are frequently inadequately planned. This leads to a natural tendency (and a necessary prelude to evaluation) to try to assist the developing program to achieve more measurable objectives, more stated programmatic goals, a more detailed plan of tasks and activities. This type of involvement, whether by an in-house or an outside expert, does not necessarily preclude an objective evaluation. For those programs which insist on an internal evaluator, one solution may be to ask an evaluation panel made up of experts in evaluation from outside the organization to review the evaluation plan (including research design, measurement instruments, statistical analysis techniques, and expected outcomes) and critique this plan. This solution would enable an in-house evaluator with, as Herbert Turner states (1976), a greater knowledge of the environment and of the way the program operates, to direct an immediate feedback of results and findings into replanning, and would normally result in a lower evaluation cost. At the same time, it provides the organization with outside experts and all the advantages that entails.

B. ETHICAL AND POLITICAL DILEMMAS IN PROGRAM EVALUATION

When conscientious efforts at program evaluation go astray, it is often pointed out in retrospect that they were caught on the shoals of evaluation politics and ethics. In other words, regardless of the methodological soundness of an evaluation, its conclusions may prove politically unacceptable. Similarly, an evaluation may in its rigorousness violate some generally agreed upon standard of professional conduct. Therefore, we turn now to an examination of some of the literature of evaluation politics and ethics in an effort to highlight the major pitfalls which confront evaluators and to seek ways in which these pitfalls may be avoided. We consider these political and ethical issues side by side because it may be useful to think of them as the two major values-based dilemmas which face evaluators today. However, it is also important to consider each independently, since the roots of each, and therefore their impacts and remedies, are distinct.

1. The Politics of Evaluation

It is Krause and Howard (1976) who most succinctly pointed out that the traditional scientific methods often fail on political grounds. They point out that there are generally four parties to an evaluation: the client, the staff, the program management and the program sponsor. Each of these groups has a different interest in several aspects of the evaluation process and these interests may conflict. For example:

- Specification of Variables. Program sponsors may push for variables which are common to the evaluation of several similar programs while program managers may prefer more program-specific variables.

- Staffing of Evaluation. In this instance, program sponsors may hope for external evaluation while program personnel may feel it can be done internally. This may have far-reaching effects on the acceptable scale of evaluation.

- Amount of Instrusion. Clients may not feel that the need for evaluation justifies the invasion of privacy embodied in the study, while program personnel may fear the impact on the validity of results if potential subjects are informed of their participation.

- Acting on Results. In this case, program sponsors may feel the need to act on results regardless of the implications of those actions for the program, while program personnel might desire only minor changes in light of evaluation. It is in this area that evaluation most often becomes tangled, for even

if the process of evaluation can be agreed upon, the implications of its results for program management are often unacceptable to one or more of the parties listed above.

Krause and Howard point out that these obstacles can only be overcome by an overt attempt to align the interests of all parties to the evaluation. Toward this end, they outline ten conditions which specify the ways in which all parties must participate in evaluation design and implementation to make evaluation viable.

Windle and Neigher (1978) describe three types of evaluation which reflect the impact that political problems can have:

- The Amelioration Model is evaluation intended for but not necessarily used for decision-making; rather, evaluation becomes an educational process for staff. Evaluation design can often be compromised to maximize the chances that evaluation results will be used.

- The Accountability Model demands evaluation for the public, both for monitoring and program support decisions. This model can have a large impact on the amount of secondary analysis which is carried out, thus injecting more than the minimum of bias. Windle and Neigher feel that professional standards for program evaluators could minimize such biases. (See a subsequent effort in this direction, Evaluation Research Society Standards, 1980).

- The Advocacy Model assumes implicitly that evaluation should be used as a tool to compete for scarce resources. Pitfalls of this approach obviously involve misleading the public and discrediting the evaluation process.

Windle and Neigher conclude by recommending seven activities which can minimize political conflicts for evaluators: they recommend a consensus process similar to Kraus and Howard's, but also note the need for "no fault" program evaluation and legal precedents on the utilization of evaluation.

Berk and Rossi (1976) insist that evaluation ought to "capitalize" on the inevitable political process in order to play a "progressive role" in program management. In other words, evaluation should be used to demystify our historical assumptions about the impact of programs and lend its political weight even to findings that the program had no effect. This rarified view is in contrast to that of Stockdill and Sharfstein (1976), who use the example of the community mental health center program to point out that evaluation is irretrievably politicized by virtue of the impacts it can have on funding decisions. It only remains for the evaluator to maximize the positive political effect by identifying which policy-makers he hopes to influence and

designing the evaluation toward that end. In order to do this, Stockdill and Sharfstein imply, evaluators must be conscious of the organizational development and administrative process of the program they are evaluating.

2. The Ethics of Evaluation

Evaluators often find themselves in dilemmas. Many of the dilemmas implicit in evaluation politics imply difficult ethical or values decisions on the part of evaluators; for example, the evaluator may ask to what extent he may let his own social values enter into the evaluation, to what extent he may let the needs of the program impact the choice of methodology, and if he may let his evaluation results be used against the program. Those dilemmas may also be termed political problems and have been described above. A second type of dilemma are the ethical and legal dilemmas inherent in doing evaluation or research on human subjects and which stem from the need to conform to statements of professional ethics. In particular, debate has focused on the need for informed consent to such research, and the special requirements of informed consent in impaired subjects. For this reason, the functionally impaired elderly constitute a group of special interest in this area.

There have been, since 1975, several major works which address the generic problems of the ethics of evaluation. The National Academy of Sciences (1975) addressed the issue through a major conference and panel discussions which asked "what consent is needed?" and "how are risks distributed?" Their conclusions sought to reconcile the interpretations of a range of disciplines - physicians, scientists, lawyers, sociologists, ethicists - and the variations of several settings or groups - prisons, mental hospitals, nursing homes, etc. - to arrive at conclusions about ethical guidelines for evaluation and research.

The work of Bower and de Gasperis (1978) reflects the conclusions of an expert panel of social scientists sponsored by the Bureau of Social Science Research. This book takes a coherent approach to the ethics of social research, laying out concisely the risks (i.e., invasion of privacy and stress) and benefits of social research and how to balance them. The authors also deal with the need for informed consent and discuss options in the regulation of human research (i.e., self control, peer review committees, professional associations, and government control).

Recently, Boruch and his associates at Northwestern University organized a conference on ethical and legal issues in applied social research. Their proceedings (Ross, Boruch, and Cecil, forthcoming) deal most explicitly with the ethical problems of randomization and of informed consent in randomized evaluations. They also deal with the fine points of regulation of research and evaluation. Finally, an exhaustive approach to the question of informed consent has been taken by Barber (1980). Barber reviews the legal basis for informed consent and discusses the dilemmas of informed consent in special populations.

It is just this issue of informed consent which seems to bear most directly on the functionally impaired elderly. There is, in fact, a significant body of recent literature which deals specifically with the special requirements for informed consent in this population. For example, to Berkowitz (1978), informed consent in the elderly must rest on an assessment of the three bases of informed consent: competence, knowledge of risks, and voluntariness of consent. Wales and Treybig (1978) review the recent history of legislation governing research on humans, and pose the crucial questions: "are elderly subjects exposed to significantly greater risks in research than their younger counterparts?" The authors suggest that the increased utilization of the aged as subjects necessitates further investivation of this question. Makarushka and McDonald (1979) highlight the function of institutional review committees in protecting the rights of research subjects. However, they warn against the possible negative concomitants of informed consent, such as exclusion from the secondary benefits of the research process. They conclude that "the formality and sophistication of the consent process should bear a relationship to the extent of the risk involved."

Finally, Reich (1978) deals cogently with several salient aspects of ethics in evaluation of and research on elderly subjects. He deals first with the dangers of research in the prevention of aging itself rather than in diseases associated with aging, and the indirect impacts that could have on the elderly. Second, the author discusses vulnerabilities of aged subjects due to their health conditions, due to possibly impaired competence, and due to institutionalization. Finally, he deals with the issue of consent by proxy and the implications that has for aging subjects.

SECTION III

EVALUATION AND MANAGEMENT INFORMATION SYSTEMS

Having dealt with the many methodological, ethical and political problems associated with evaluation, the center's evaluator is finally faced with the most difficult problem of all: how to operationalize the evaluation, or how to collect and systemize data so as to provide meaningful and useable evaluation results. Thus, we turn at this point to an examination of the state of long term care data. In a subsequent section, we offer some examples of the systemization of data into management information systems which may provide valuable models for Long Term Care Gerontology Centers. It may go without saying that a management information system functions as an often computer-based protocol for the collection of specific data — about patients (e.g., their health status), their care (services received, impacts of those services) and administration of programs (e.g., units of service, costs).

Long term care data has been a matter of concern to gerontologists for many years, and innumerable instruments or data sets have been proposed. As early as 1967, Lawton compared ten indices of health, developing a matrix of intercorrelations through factor analysis to arrive at conclusions about which measures were most indicative of health status. More recently, Lohmann (1979) has attempted a similar task with indicators of social adjustment, life satisfaction and morale.

Similarly, Bloom (1975), in a somewhat dated but very comprehensive chapter, has surveyed a wide variety of instruments specific to long term care. He categorizes these instruments (which deal only with patients, not services or administration) into the six exhaustive divisions described in Section IIA. There have also been several attempts in recent years to systematize long term care data, or to develop in the areas of patient assessment and services one last instrument which would include all the "best" (i.e., most useable) data. The Patient Appraisal and Care Evaluation (PACE, see Abdellah, 1978) was one such instrument. Another, the Patient Classification for Long Term Care (Densen, Jones, McNitt et al, 1976) showed that "widespread use of ... common language in the (patient assessment) system is both feasible and practical."

More recently, the U.S. National Committee on Vital and Health Statistics of the National Center for Health Statistics devised a Long Term Care Minimum Data Set (1978), which included definitions of data elements in patient assessment, services and administration. It is designed for "routine or repetitive use by on-going information systems" and for linkages with other sources of data such as the Census.

Finally, in a landmark document, an Interagency Statistical Committee on Long Term Care for the Elderly (1980) produced a compendium of federally-sponsored data sources on the functionally impaired elderly. Their report offers five recommendations:

- Access to data should be improved through increased documentation and preservation of results by the federal funding source.

- Analysis of available data should be carried out with the objectives of answering policy questions, identifying emergent issues, and promoting better-targeted data collection in the future. Nine salient policy questions are specified.

- Gaps in coverage in national surveys should be eliminated. Examples of major gaps are: data on persons residing in rooming and boarding homes, data on informal support systems and data on dynamics leading to institutionalization.

- A minimum set of data items should be standardized. This implies the extension of utilization of the Long Term Health Care Minimum Data Set mentioned above.

- Further data gathering efforts should be piggy-backed on other major efforts such as the Annual Housing Survey or the Health Interview Survey.

Given the existence of the data instruments, sets and results described in the compendium, new programs are left wondering how to manipulate data or how to structure it for maximally useful reports. Knowelden (1976) offers some suggestions for the design of data systems:

- The system should be able to link data from several sources
- The system should be able to link data from the same source over time
- The system should be capable of predicting demand for services.

With these criteria in mind, we turn to an examination of management information systems in several settings in the hope of providing models which Long Term Care Gerontology Centers can emulate.

A report by the National Center for Health Services Research (Demonstration and Evaluation of a Total Hospital Information System, 1977) describes the development of a prototype management information system for acute care. The developers noted three distinct phases in the demonstration and evaluation of a new type of MIS, and described obstacles encountered in each phase:

- Implementation is the phase in which the system is installed and operationalized. Training, and the accompanying obstacles, takes place in this phase, as does the transition from manual to automated data gathering. A major objective in this period is high utilization of the new system.

- Validation involves modifying the system to resolve obstacles to utilization and to optimize the match between information needs and reports.

- System Extension extends the scope of the system, again with the objective of providing additional useable data. To the extent of system capability, obstacles in these latter two phases depend on consensus about what is preventing utilization or in what direction the system ought to be expanded.

Hagedorn et al (1976), writing for community mental health program evaluators, make the point that every program has an MIS, even if it exists only in the heads of managers. Thus, they define the MIS as the vital management information necessary for program evaluation. The authors define seven different types of data which can enter into a management information system:

- Catchment area population characteristics
- Program goals and objectives
- Client information
- Service utilization information
- Staff activities information
- Fiscal information
- Information about integration with other community agencies.

Then, they develop a matrix which lists several types of evaluation and specifies which of the types of information listed above are necessary for each type of evaluation.

Several of the State Units on Aging have also developed management information systems. A survey of such systems conducted by the National Association of State Units on Aging (1979) noted that a major obstacle to implementation was the lack of standards about what information should be collected. In fact, a casual definition of the contents of periodic reports has been the only guideline to information requirements. This lack of standardization has prevented the sharing of information with other programs or the replication of existing effective information systems. Therefore, the NASUA (in a companion document - "A National Position Paper on Information Requirements for Managing State and Area Agencies on Aging", 1980) defines indirectly a minimum data set for SUAs. That is, they pose a series of seven management evaluation questions and conclude that the data needed to answer these questions will constitute the minimum data set. In

general, they emphasize the importance of working toward comparability of data in all agencies.

Monitoring and evaluation through management information systems can also have far-reaching effects on program management at the federal level. Chafetz (1979) describes how results from a standardized management information system in local alcohol programs were utilized. He notes:

> Findings from the monitoring system and related evaluations have resulted in significant program changes, and even policy changes at the national level. Technical assistance has been provided to the projects as the indicators of need have become apparent. Examples of direct action taken by NIAAA as a result of the monitoring system include specific technical assistance to individual projects; revisions of program guidelines to provide greater emphasis on outpatient care; initiation of a program to provide incentives for attracting third-party payers; and a program to upgrade the management capabilities of project staffs.

He adds:

> Local projects make use of the data in management, in treatment-related areas, and in gaining support from local governing boards and other resource agencies by providing facts to these bodies. Among the ways in which data are reported as used locally are changes of emphasis in treatment modes, revisions of staffing patterns, and seeking out additional referral sources. In addition, trends are carefully monitored in such areas as client outcome, treatment costs, and non-government funding sources.

Thus, we see that data collection and management information can present a variety of challenges to individual centers or groups of centers. However, the potentialities of center MIS are also apparent in the context of evaluation. With this special aspect of evaluation in mind, we turn to an examination of relevant case studies of evaluation which may provide broader analogues for center evaluation.

SECTION IV

SPECIFIC EVALUATION APPLICATIONS

A. INTRODUCTION

This section is a review of the literature dealing with application of evaluation research and program evaluation to real world examples. In reviewing the literature, it was found that applications in the health service delivery system and the mental health service delivery system were the more numerous and complete applications. Even applications dealing with the elderly normally dealt with either the mental health or the physical health of the elderly. For these reasons, this section is divided into:

- Applications to programs for the elderly
- Applications to mental health
- Applications to health services
- Applications to centers.

Of the examples cited, some are single-setting examples while others are multiple setting examples. No examples were found that were so comprehensive as to cover all components of a Long Term Care Gerontology Center (education and training, service demonstration, research, technical assistance, information dissemination).

What follows are brief descriptions of what each application covers. No attempt has been made to analytically review these as a whole, but outstanding applications have been so noted.

B. APPLICATIONS TO PROGRAMS FOR THE ELDERLY

In December 1976, Harvard Medical School submitted the final report of the Patient Classification for Long Term Care Project to the National Center for Health Services Research. This final report, (Densen, Jones, McNitt, 1976) describes the development and utilization of a patient assessment methodology. The Harvard Medical School quantifies health status of the chronically ill and aged to show changes over time. Examples were presented that will be useful to Long Term Care Gerontology Centers in their approach to evaluating quality of care, "both from the individual patient standpoint as in current utilization review procedures or from the group standpoint, as in determination of norms of patient care". This therefore allowed outcomes of patients in different settings receiving different treatment modalities to be compared. The initial application of the patient classification system took place in a chronic disease hospital. Subsequently, it was applied in seven nursing homes. This study describes the study design, the assessment procedures, the data collection procedures, and the study findings. It lists variables that may be most valuable to Long Term Care Center evaluators including:

- Sociodemographic characteristics
- Medical conditions in patients
- Numbers of specific medical conditions in patients
- Presence of certain impairments in patients
- Functional status of patients (mobility level, transferring, walking, wheeling, stair climbing, bathing, dressing, eating/feeding, toileting, bowel function, bladder function, orientation, communication, and behavior)
- Appropriate levels of care
- Status of patients.

A report on The Well-Being of Older People in Cleveland, Ohio (1977) prepared by the Comptroller General of the United States, (General Accounting Office) discusses the well-being of older people, describes program elements that are designed to help them, and explores issues related to these programs. Its purpose was to assist Congress and the Executive Branch in understanding what can be learned from assessing the well-being of older people.

In a soon to be published manuscript, Greenberg et al (1980) offer a comparative study of nine federally-funded long term care demonstration projects. These include:

- Alternative Health Services - Atlanta, Georgia
- Alternatives to Institutionalization - Massachusetts
- Community-Based Care Systems - Washington State
- Community Care Organization - Wisconsin
- Affects and Costs of Daycare Homemaker Services
- The Highland Heights Experiment - Fall River, Massachusetts

- Monroe County Long Term Care Project - Monroe County, New York
- On Lok Senior Health Center - San Francisco, California
- Triage - Plainsville, Connecticut.

This manuscript summarizes much of what has been learned in past demonstration projects as represented by the above nine, and poses key policy questions which have not been answered.

In a two-volume report entitled The P.S.R.O. and the Nursing Home, published by the Rand Corporation in August of 1979 and funded by Health Care Financing Administration, ten P.S.R.O. demonstration projects in long term care were reviewed. The cumulative experience of these ten projects summarizes the state-of-the-art of long term care review. The value of this study to the evaluators in Long Term Care Gerontology Centers includes:

- Its listing of criteria in a comparison between the ten nursing homes
- Its assessment instruments
- Medical status and patient care data items by site and form.

Dr. Thomas Pastorello (1979) has studied the need for evaluative research in the area of cost-effectiveness of long term care. He describes both the basic cost-effectiveness methodology as well as a proposed alternative cost-effectiveness methodology. The methodology that is tested and analyzed is the analysis of co-variance and path analysis-based cost-effectiveness model for evaluating comprehensive out-patient and inpatient geriatric services. The author claims this methodology eliminates some of the problems inherent in existing cost-effectiveness models. It is an excellent summary and analysis for both the evaluator new to cost-effectiveness research as well as to the more experienced one.

Besides presenting generalized cost-effectiveness techniques for comparing alternative health care programs, another resource on Cost—Effectiveness Analysis in Alternative Health Care Programs for the Elderly (Doherty and Hicks, 1977) makes an important distinction between cost-effectiveness analysis and cost/benefit analysis. Cost-effectiveness analysis is "a technique for assessing and comparing the cost and effectiveness of alternative systems or programs". It assists the decisionmaker by providing an analytic framework by which conclusions can be reached in a systematic way. The authors note:

> In cost/benefit analysis, both benefits and costs are typically reduced to monetary terms. In cost-effectiveness analysis, however, effectiveness need not be so reduced. The primary reason for the distinction is that it is not always useful or meaningful to aggregate program benefits or facts into economic indicators, be they utility or money.

The authors further state that the distinction between economic and non-economic benefits makes cost-effectiveness analysis appropriate for evaluating alternative care programs for the elderly. The distinction made in this article between cost-effectiveness and cost/benefit analysis is one often cited; however, it is not universally held.

After describing how cost/benefit analysis fits into the evaluation typology of process, outcome and structure, Pollak (in Evaluative Research on Programs for the Elderly,1977) describes the impact variables in the context of cost/benefit analysis of programs serving the elderly. This paper is slightly more theoretical than the ones above but still provides an illuminating perspective for evaluation. In another perspective, Doherty et al (1978) address the viability of alternatives to hospital and nursing home care for the elderly based partially on cost-effectiveness considerations. The most valuable part of this paper is the discussion of the cost-effectiveness of a sample of U.S. programs. Under the assumption that day and home care are designed to prevent or reduce institutionalization, a descriptive summary of data from the sample programs that would be compatible with cost-effectiveness analysis is presented. For example, the estimated daily savings per client in dollars and in days of institutionalization is presented.

Another approach to systematic evaluation of alternative programs for the aging is the Assessment of Functional Status in a Program Evaluation and Resource Allocation Model (1978) by Maddox and Dellinger. The strategy presented consists of an application of quasi-experiment to two communities. The strategy has three elements. These are:

> a reliable, valid procedure for assessing five dimensions of individual functioning; a procedure for disaggregating complex service programs into standard generic units; and a matrix which relates changes and functioning over time to exposure to identify aggregates of generic services.

Individual program evaluations also provide analogues for Long Term Care Gerontology Centers. For example, ACCESS is a demonstration project supported by the Health Care Financing Administration, the Administration on Aging, and by the New York and Monroe County Department of Social Services. Its purpose is to demonstrate alternative approaches to delivering and financing long term care. Its target population is the adult disabled and elderly population in Monroe County, New York. A paper by Eggert, Bowlyow and Nichols (1980) summarizes the project and the attainment of goals. This includes statistics on client disposition and level of care by payment status, average occupancy in acute care beds by patients before and after ACCESS and daily Medicaid costs for home care services.

Blenkner et al (1971) describe a research project conducted by the Benjamin Rose Institute. The study consisted of collecting data on a sample of 164 protectives from 13 participating agencies over a 12-month period from June of 1964 to May of 1965. Although the study is nine years old, it represents a comprehensive approach to studying one elderly sub-population. Among other things, it shows how multiple agencies within one community can cooperate on a research study. In addition, through interviews, observation and clinical case work ratings, subjects in the text and control groups were compared for:

- Mental function
- Physical function
- Physical environment
- Concrete assistance
- Interested parties
- Environmental protection
- Contentment
- Signs and symptoms
- Collateral stress.

Applebaum, Seidl and Austin (1980) have dealt with the evaluation of the Wisconsin Community Care Organization. The purpose of the CCO was to provide care for the aged and disabled individuals in their own homes who might otherwise have become nursing home residents. The authors describe the CCO evaluation method from both an organizational and experimental perspective. They then show the cost comparison between experimental and control groups as well as a comparison of the living situation of the clients.

The staff of the Institute on Aging, Portland, Oregon, prepared a paper on evaluating coordinated community service systems (O'Brien et al, 1977) to outline the problems and proposed potential strategies for conducting such evaluative research. A coordinated community system is defined as "a set of political, economic, and/or service organizations located within an identified geographic area which engage in centralized planning, participate in coordination of function, and cooperate in structural mechanisms for focusing resources on an identified community target for the purpose of maximizing a specialized welfare goal." The authors present a model for the conduct of the evaluative research. The model as they present it contains the domains of analysis (the coordinating agent, environment, organization and client), the relationships of interest between these domains, and the dimensions across which the domains will be analyzed (history, structure, knowledge, attitudes, technology and performance). In addition, their model delineates some of the variables required to measure the association between domains and dimensions.

C. APPLICATION TO MENTAL HEALTH

The National Institute of Mental Health supported the development of a source book for mental health managers and program evaluators entitled Evaluation in Practice: A Source Book of Program Evaluations Studies from Mental Health Care Systems in the United States (Landsberg et al, 1979), which illustrates a variety of case studies of program evaluation projects. This report deals with actual projects in a variety of mental health settings. The source book describes eighty-one different applications. Examples fall into the following categories:

- Needs assessment
- Patterns of use
- Cost analysis
- Client oriented outcome and community indices
- Cost outcome and cost-effectiveness analysis
- Consultation and education
- Quality assesment.

In addition, a reader's guide is provided which categorizes the articles based on the type of program and technique utilized. The type of programs illustrated in this source book include:

- After care/day treatment
- Comprehensive mental health services
- Consultation and education
- Crisis phone-emergency services
- Inpatient
- Outpatient
- Residential treatment.

The program evaluation techniques illustrated include:

- Behavior observation
- Chart review
- Cost analysis
- Demographic analysis
- Interview-in person
- Interview-telephone
- Outcome measures (all types)
- Questionnaire survey documents
- Site visits
- Other standardized instruments
- Utilization data.

Although the above document is quite comprehensive, a few additional sources may be helpful. For example, Alpander and Gutman (1974) illustrate structure evaluation in the discussion of the impact of change on a specific organization, a psychiatric hospital in Maine.

The authors developed a model for measuring organizational climate. Through a series of questionnaires and interviews, they examined perceptions of importance of the job responsibility of team workers, perceptions of importance of internal motivational factors, perceptions of importance of external motivational factors, and staff perception of the impact of utilization.

Four additional articles are useful in understanding the evaluation of community mental health programs/centers. Blackwell and Bowman (1977) propose a multi-level, multi-focus approach to evaluation with application to a community mental health center. Although no findings are provided, this is a comprehensive overview. Hargreaves, Attkisson, McIntyre, and Siegel (1974-1975), on the other hand, present much of the findings of their study. They visited seventy facilities in forty different catchment areas and identified five major areas of concern relative to enhancing a program's capability for evaluation. They then rated fifty-one of the community-based programs on their level of evaluation activity, level of information capability, and level of integration of evaluation into management. Morrison and Sundell (in Zusman and Wurster, 1975) describe an assessment of community needs and resources conducted by the Research and Evaluation Department of the River Region Mental Health Retardation Board in August of 1972. The assessment was based on a variety of environmental data, including census statistics, demographic characteristics of clients, surveys, field observation, and other agency statistics. The purpose of the assessment was to provide relevant community information for program evaluation and planning. It is a good but brief illustration of a comprehensive data collection effort. Finally, Emery L. Cowen (1978) described several "clusters of difficulties that plague community program evaluation studies, including source of data bias, issue of design, problems in the choice and use of criteria, problems of experimental control".

D. APPLICATION TO HEALTH SERVICES

Kleffel and Wilson (1975), following the structure, process and outcome concepts of program evaluation outlined by Donabedian, present a handbook for home health agencies to develop an evaluation plan. This description includes:

- Sixty-day continuous record review
- Admission review
- Multidisciplinary patient care review.

It should be pointed out that this handbook focuses on utilization review and the evalution necessary to meet future PSRO expectations. As a result, it is not a comprehensive evaluation plan. It should, however, be very useful to Long Term Care Gerontology Centers who wish to evaluate a home care component.

In a contrasting field, Cancer Care, Inc., and the National Cancer Foundation (1973), studied the impact, cost and consequences of catastrophic illness of all families who received extended services from Cancer Care, Inc. and whose cases were closed during the period from the beginning of 1971 through the end of March 1972. The study plan described six purposes:

1. To provide a meaningful picture of the total cost of catastrophic illness in dollar amounts and to illustrate other hardships which accompany the illness, through a study of selected cases.

2. To document the need for inclusion of coverage for cost of catastrophic illness as an integral part of any national health insurance plan or any other universal plan for health care.

3. To interpret to individuals and organizations concerned with provision of insurance benefits and to individuals the value of catastrophic illness coverage or major medical provision.

4. To provide a better understanding of the financial situation of clients, the nature of the problems confronting them, and the kinds of services used.

5. To indicate the need for services to maintain patients in their own homes; to identify this need without differentiation as to whether it is normally considered a health or social service.

6. To stimulate among professional workers and the general public an understanding of the human factors involved in catastrophic illness.

Although the design was not experimental, this research study has produced some very interesting information that should be applicable to similar studies underway in the Long Term Care Gerontology Centers. The study concentrates on the total cost of illness and the social and personal consequences of catastrophic illness on the patient, children, marriage relationships, adult relatives and family relationships, and on elderly people.

E. APPLICATION TO CENTERS

No evaluation applications that were considered to be comprehensive and relevant to the Long Term Care Gerontology Centers were found. The search focused solely on those centers which had research, education training, service demonstration models, and technical assistance. One article, however, was found which could conceivably be very useful to Long Term Care Centers is by Dorothy Beck (1979); the article describes the potential areas for university-agency cooperation in teaching, research and evaluation. These include patterns for cooperation at the masters and baccalaureate level (research placements in family agencies, undertaking client follow-up studies in research courses, methodological tests on true client follow-up studies, in-depth interviewing on special topics), patterns for cooperation at the doctoral level (mining agency experience for dissertation topics, developing instruments for evaluating change, assessing changes in the absence of treatment), and patterns for cooperation at the faculty level (detailed process studies, consulting on agency information systems, preparing integrated summaries). This article therefore could probably be useful to the Long Term Care Gerontology Center evaluator in getting ideas relative to the relationships between the center and the community agency.

Several attempts have been made to evaluate Centers of various types; however, these studies focus on one function — i.e., service or research, or have focused at the policy rather than program level. Examples of this are Hetherington (1979) on Mental Retardation Centers, Carter et al (1978) on Specialized Centers and Core-Funded Centers, The National Institute for Child Health and Development (1978) on Mental Retardation and Population Research Centers, and the University Affiliated Program/USC (1980) on University-Affiliated Mental Retardation Centers.

The strengths and limitations of the analogues described above must be obvious. They are offered in the hope that they may provide ideas, inspiration and examples for Long Term Care Gerontology Centers.

EVALUATION

BIBLIOGRAPHY

Abdellah, F.G. "The Future of Long-Term Care." Bulletin of the New York Academy of Medicine 54 (1978): 261-270.

This article deals with the development of the Parent Appraisal and Care Evaluation (PACE) instrument and outlines how PACE will be controlled and evaluated. Abdellah points out future directions for this type of evaluation: i.e., the extension to noninstitutional care and auxiliary services.

Alpander, G.G. and Gutmann, J.E. "A Model for Measuring the Impact of Change on an Organization." Hospital and Community Psychiatry 25 (1974): 719-723.

This article forwards a method for evaluating organizational climate after the introduction of an innovation.

Angrist, S.S. "Evaluation Research: Possibilities and Limitations." Journal of Applied Behavioral Science 1 (1975): 75-91.

This article provides a critical review of the literature in evaluation research, highlighting the possibilities and benefits offered in terms of costs and effectiveness. Emerging theories and associated research are pointed out. A discussion of the drawbacks to evaluation in its current form is presented.

Applebaum, R.; Seidl, F.W.; and Austin, C.D. "The Wisconsin Community Care Organization: Preliminary Findings from the Milwaukee Experiment." The Gerontologist 20 (1980): 350-355.

The three Wisconsin channeling agency demonstrations were evaluated both organizationally and experimentally. Random assignment of subjects to CCO and non-CCO groups revealed that, taking CCO costs into consideration, there was no significant difference in costs between the two groups.

Barber, Bernard. Informed Consent in Medical Therapy and Research. New Brunswick, N.J.: Rutgers University Press, 1980.

Covers the subject of informed consent in some depth, including the topic of informed consent in special populations. Extensive bibliography.

Beck, D.F. "Patterns for university-agency cooperation in the teaching of research." Social Casework 60 (June 1979): 343-349.

This article outlines how universities and social service agencies can cooperate to train social workers at the BSW, MSW and doctoral level to do evaluation and research. At the BSW and MSW level, students can obtain research placements in agencies or can conduct follow-up studies in agencies in the context of research courses. At the doctoral level, agencies can provide dissertation topics

while using universities to design research and evaluation instruments. At the faculty level, research can be jointly sponsored, and information systems can be developed with the assistance of universities.

Berk, R.A. and Rossi, P.H. "Doing Good or Worse: Evaluation Research Politically Reexamined." Social Problems 23 (1976): 337-349.

The authors argue that evaluation is by nature political. They believe that evaluators should use political skills to maximize the chances that evaluation results will be utilized and to force home the point that many social action programs show no significant effects.

Berkowitz, S. "Informed Consent, Research, and the Elderly." The Gerontologist 18 (1978): 237-243.

This article points out that informed consent of elderly subjects, as other subjects, must rest on an assessments of their competence to give consent, of their knowledge of the risks associated with participation, and of the voluntariness of the consent. The author draws a distinction between experimental and therapeutic research, and describes some safeguards which can minimize problems in these areas.

Blackwell, B.L. and Bolman, W.M. "The Principles and Problems of Evaluation." Community Mental Health Journal 13 (Summer 1977): 175-187.

This article examines the multidimensional perspectives of evaluation within a community mental health center. Special attention is given to goal attainment and decision-making.

Blaton, J. and Alley, S. "How Evaluation Findings can be Integrated into Program Decision-Making." Community Mental Health Journal 14 (Fall 1978): 239-247.

This paper deals with feedback in the decision-making process, particularly feedback which stems from research and evaluation studies. Having identified the major difficulty in the decision-making process as the integration of research and evaluation findings, the authors describe barriers to implementation and recommend procedures to eliminate them. Special attention is drawn to the need for clear presentation of information to improve the feedback process.

Blenkner, M.; Bloom, M.; Wasser, E.; and Neilsen, M. "A research and demonstration project of protective services." Social Casework 52 (1971): 483-499.

An early example of evaluation of community-based services based on a randomized design. The work took place at the Benjamin Rose Institute in Cleveland.

Bloom, M. "Evaluation Instruments: Tests and Measurements in Long Term Care." In Long Term Care: A Handbook for Researchers, Planners and Practitioners, pp. 573-627. Edited by S. Sherwood. New York: Spectrum, 1975.

Measurements and tests in six areas of long term care are discussed: mortality/survival, physical function, mental function, affective function, social and interpersonal function, and environmental function. The literature covered is largely drawn from the period 1965 to 1972.

Blum, H. "Evaluating Health Care." Medical Care 12 (1974): 999-1011.

This paper explores the evaluation of the quality of medical care and its relationship to the structure of the health care delivery system, the care-giving process and the outcomes of care. Based on a continuum of care model, the author focuses on entry to care and system structure as those areas which can be altered to enhance the quality of care. In the belief that quality of care is a function of evaluation, recommendations for improving evaluation efforts are provided.

Boruch, R.F. "Educational Program Evaluations: Some Implications for Evaluation Policy." American Behavioral Scientist 23 (November 1979): 275-296.

The author summarizes implications of governmental interest in obtaining better estimates of the comparative effects of new social programs, and on the increased willingness to estimate effects for pilot tests of new programs. A recent history of evaluation is provided, along with a section on the design of evaluations. The implementation of programs is examined and an analysis of information generated by evaluations is provided.

Boruch, R.F. et al "Randomized experiments for evaluating and planning local programs: a summary on appropriateness and feasability." Public Administration Review 39 (1979): 36-40.

In the realization that evaluation is an increasingly crucial part of any health care program, this article describes randomized experiments as an evaluation methodology. The authors address criticisms regarding the shortcomings of randomized experiments, and conclude that in many instances, they are, indeed, the preferred method of measurement.

Bower, R.T. and DeGasperis, P. Ethics in Social Research: Protecting the Interests of Human Subjects. New York: Praeger, 1978.

This is a concise study of risks of research and evaluation (e.g. privacy, breaches of confidentiality, stress), of the nature of informed consent, and of how research can be regulated by the researcher, his peers, professional associations or the governments. Recommendations are offered.

Britan, G.M. "Evaluating a Federal Experiment in Bureaucratic Reform." Human Organization 38 (Fall 1979): 319-324.

The author notes that experimental evaluation is often not appropriate for "broad aim" programs. He applies his alternative contextual evaluation model to a program designed to develop cooperative policy experiments among government agencies. Unlike experimental and quasi-experimental evaluation, which "treat social action programs as if they were laboratories of change," contextual evaluation provides information about program activities and identifies factors that significantly affect program operation.

Britan, G.M. "Experimental and Contextual Model of Program Evaluation." Evaluation and Program Planning 1 (1978): 229-234.

In an attempt to establish an alternative evaluation theory (given the difficulty of applying experimental--randomized--evaluation in social action programs) Britan outlines the assumptions and implications of contextual evaluation. He points out that several evaluation methodologies (i.e., systems evaluation and clinical evaluation) are implicitly based on contextual evaluation. Conceptually, contextual evaluation looks at the process of program development rather than its outcomes. In this way, it can examine a variety of possible causal factors and clarify possible goals and outcomes. Britan offers the example of a federal cooperative policy program in which "formal mandates were greatly modified by informal understandings"; contextual evaluation was able to capture this process. Finally, Britan provides a comprehensive typology which links the choice of program evaluation method to the program's place on three continua: broad/narrow goals, fuzzy/clear theory, and specific/diffuse results. He adds that organizational locus and program scale should also be considered in devising an evaluation strategy.

Brody, R. and Krailo, H. "An Approach to Reviewing the Effectiveness of Programs." Social Work 23 (May 1978): 226-232.

In an effort to promote the evaluations of agency programs and the impact of evaluation on allocation of funds, the authors suggest an evaluation approach they call Results-Oriented Social Services Evaluation (ROSSE). ROSSE operates through the definition of operating, production and impact objectives, specifying how success will be recognized in terms of condition, quantity, time and target population.

Brook, R.H. and Avery, A.D. "Quality of Medical Care Assessment Using Outcome Measures." Washington National Center for Health Services Research, 1977. DHEW Publication No. (HRA) 77-3176.

This document summarizes the final report presented to the National Center for Health Services Research by the contractor, the Rand Corporation. The purpose of the study was to provide a conceptual overview of methods used to measure outcome and to

develop short term outcome measures for eight common health problems. A glossary is included. Available from NCHSR Office of Scientific and Technical Information, 3700 East-West Highway, Rm. 744, Hyattsville, Md. 20782 (Phone 301/436-8970).

Cain, G.G. and Hollister, R.G. "The Methodology of Evaluating Social Action Programs." In Evaluating Social Programs: Theory, Practice and Politics, pp. 110-137. Edited by P.H. Rossi and Walter Williams. New York: Seminar Press, 1972.

This chapter deals with outcome evaluation (which is equated with cost-benefit analysis) in social action programs (which are defined as the complex made up of manpower programs, welfare services, and other anti-poverty programs). Problems in evaluation design are surveyed, with a focus on specification of objectives, use of control groups, and replicability criteria. Statistical and economic considerations are reviewed, as are organizational problems in evaluation: timing, sticking to design, and using internal data systems. Finally, the acceptability of evaluation results is discussed.

Calsyn, R.J.; Fergus, C.O.; and York, J.C. "Interrupted Time Series Analysis: A Research Technique for Evaluation of Social Programs for the Elderly." Journal of Gerontology 32 (January 1977): 89-96.

The authors endorse more rigorous (i.e. experimental) evaluation of innovative programs. They demonstrate the use of interrupted time series analysis, which assesses an outcome variable before and after treatment. They also discuss multiple time series analysis.

Cancer Care, Inc. and The National Cancer Foundation. "The Impact, Costs and Consequences of Catastrophic Illness on Patients and Families." New York: Cancer Care, Inc. and The National Cancer Foundation, 1973.

This study surveyed all families who received extended service from Cancer Care between January 1971 and March 1972. Research findings dealt with the financial, social, and personal consequences of catastrophic illness.

Caplan, E.K. "Evaluation of a Program Involving Multiple Community Agencies." International Journal of Comparative Sociology 9 (June 1968): 137-142.

This paper discusses the major obstacles and the issues surrounding evaluation research. Basing his generalizations on a project which evaluated the degree of coordination among twenty-three community social welfare agencies participating in a juvenile delinquency demonstration project, the author identifies problems in interorganizational relationships as the primary obstacle to directing a demonstration as well as to increasing its impact.

Caro, F..G., ed. Readings in Evaluation Research. New York: Russell Sage Foundation, 1977.

Caro anthologizes in this volume nearly every significant article and author of the 1960's and early 1970's. Among others, the book contains:

- Edward Suchman: "Evaluating Educational Programs."
- Herbert Schulberg and Frank Baker: "Program Evaluation Models and the Implementaion of Research Findings."
- Donald Campbell: "Reforms as Experiments."
- Peter Rossi: "Evaluating Social Action Programs."

The editor prefaces the collection with an often cited overview of evaluation research which highlights the conflicts between the process and outcome orientations to evaluation. He places evaluation firmly in a planning/implementation/evaluation cycle. In a historical perspective, Caro traces the evaluation of social programs since 1900. He elucidates some of the factors affecting investment in evaluation research and some of the problems associated with administration of evaluation research. In concluding, Caro suggests some strategies for coping with these problems.

Carter, G.M.; Lai, C.S.; and Lee, C.L. A Comparison of Large Grants and Research Project Grants Awarded by the National Institutes of Health. Santa Monica, California: Rand Corporation, 1978.

This monograph compares centers and traditional research grants using amount of collaborative research, research output, and peer review results as the criteria. It was found that center research was of lower average quality, literature from centers was cited less often, and center personnel fared worse in grant competition; however, the findings were not consistent over all centers. The grants included were with Allergy and Allergic Disease Centers, Asthma and Immunology Centers, Arthritis Centers, National Cancer Centers, Dental Research Centers, Environmental Health Centers, Burn and Trauma Centers, Mental Retardation Centers, Hypertension Centers, and Auditory Disorder Centers. (Available through the Rand Corporation Publications Department, 1700 Main Street, Santa Monica, CA. Cost: $5.00. Publication No. R-2228-NIH.)

Chafetz, M.E. "Monitoring and Evaluation at NIAAA." Evaluation 2 (1974): 49-52.

Chafetz describes a computerized monitoring system developed by the National Institute on Alcohol Abuse and Alcoholism that provides continuous information for planning and decision-making at the national level. The system contains a core data base on each of the programs, and additional data which applies to

specific subpopulations. Chafetz describes the capabilities and problems of the system, but concludes that, overall, it has contributed to more efficient and effective delivery of services.

Chen, M.K. and Yang, G.L. "Evaluation of the Long Term Care of the Aged: A New Approach." Paper presented at the 107th annual meeting of the American Public Health Association, November 4-8, 1979.

Chen (of the National Center for Health Services Research) and Yang (of the University of Maryland) suggest a new method of cost-effectiveness evaluation for long term care programs. An experimental or outcome methodology limited to health status indicators, the method involves:

- measuring health status at regular intervals
- figuring the change in health status during the interval, and
- on the basis of that change, assigning the client to one cell of a matrix of change values
- assigning weights reflecting cost or effectiveness to each cell
- computing an index based on the distribution of clients over the cells.

In this way, alternative kinds of care can be compared and cause and effect relationships can be established.

Cohen, Elias. "Legal Issues in Consent for Research: Whose Interests Are Served." Paper presented at the 31st Annual Meeting of the Gerontological Society, Dallas, Texas, November, 1978.

In this provocative paper, Cohen deals with the elements of legally effective consent, the ethical history and principles on which these elements are grounded; he offers some suggestions for overcoming obstacles to informed consent in the elderly. Copies are available from Judith Gran, Public Interest Law Center, 1315 Walnut St., Philadelphia, Pennsylvania 19107 (Phone 215/735-7200).

Colorado PSRO Demonstration Project. The Colorado Experience in PSRO Long Term Care Review. Denver: Colorado Foundation for Medical Care, 1978.

This document comes highly recommended as an example of experimental evaluation. This document may be reprinted in the near future. For further information, contact Dr. Keith Case, Colorado Foundation for Medical Care, 1601 E. 19th Ave., Denver, Colorado 80218 (Phone 303/861-1221 Extension 272).

Conly, S. "Critical Review of Research on Long Term Care Alternatives." Washington: Project Share, 1977.

Twenty-five research projects are reviewed which aim to test the effectiveness of alternatives to institutional care. The projects are summarized, and their research design and technique are critiqued. Available though Project Share, P.O. Box 2309, Rockville, Md. 20852. (Phone 301/251-5170).

Coursey, R.D.; Specter, G.E.; Murrell, S.E.; and Hunt, B. Program Evaluation for Mental Health: Methods, Strategies and Participants. New York: Grune and Stratton, 1977.

A useful analogue in the mental health field, this book is intended to reflect dialogue among researchers, evaluators, administrators, practitioners and consumers. It includes among others:

- J.W. Zinober: "Starting an Internal Evaluation Program: Initial Steps"
- M. McIntyre: "Approaching Program Evaluation: Clarify Tasks"
- W. Porter: "A Management by Objectives Approach to Program Evaluation"

Cowen, E.L. "Some Problems in Community Program Evaluation Research." Journal of Consulting and Clinical Psychology 46 (August 1978): 1792-805.

This article focuses on problems that plague community program evaluation efforts. The author identifies sources of data bias, issues of design, problems in the choice and use of criteria and problems of experimental control as the major barriers to satisfactory program evaluation.

Densen, P.M.; Jones, E.W.; McNitt, B.J. et al. "An Approach to the Assessment of Long-Term Care." Hyattsville, Md.: National Center for Health Services Research, 1976.

This project developed a patient classification and then applied it to program evaluation, first in a chronic disease hospital, then in seven nursing homes. Available from the National Technical Information Service, Springfield, VA (Phone 703/487-4650). Also available in the NCHSR Research Summary Series under the title "Assessing the Quality of Long Term Care." DHEW Publication No. (PHS) 78-3192. Access through National Center for Health Services Research, Office of Scientific and Technical Information, Room 7-44, 3700 East-West Highway, Hyattsville, Md. 20782 (Phone 301/436-8970).

DesJarlais, D.C. "Evaluation research paradigms and drug abuse treatment evaluation." Journal of Psychedelic Drugs 10 (1978): 51-55.

DesJarlais describes three paradigms of program evaluation: the traditional 'goal attainment' approach, as advocated by Weiss and Suchman, the 'systems' approach, as advocated by Etzioni Schulberg, Sheldon and Baker, and the 'decision-theoretic' approach advocated by Guttentag. He then applies each model to the problems faced in evaluating drug abuse problems.

Doherty, N. and Hicks, B. "Cost-effectiveness Analysis and Alternative Health Care Programs for the Elderly." Health Services Research 12 (Summer 1977): 190-203.

In this proposal for a service evaluation methodology, the authors seek to advance the method of measuring effectiveness in the context of cost-effectiveness evaluation of long term care service modalities. They suggest a tabular display approach which matrixes (weighted) outcome criteria and alternative programs. The special nature of outcome criteria in geriatrics is noted (i.e., no change--maintenance of status--could be construed as the threshold of positive outcomes). A transition matrix is also described which captures assessments over time. The authors note that a short project period can sometimes present a constraint to gaining valid longitudinal data, and that value judgements are implied in this sort of evaluation. However, they feel the method may be useful in identifying "significantly preferable" programs so that "greater confidence may be placed in continuing" them. They suggest that program guidelines or an independent Delphi technique can be utilized to arrive at value judgements.

Doherty, N.; Segal, J.; and Hicks, B. "Alternatives to Institutionalization for the Aged: Viability and Cost Effectiveness." Aged Care and Services Review 1 (January/February 1978): 1-16.

This survey of the alternatives to institutionalization literature attempts to compare a number of alternatives for their cost-effectiveness. This analysis revealed a clear distinction between programs with and without significant cost savings. The author goes on to outline the impact of these alternatives on aggregate demand, and recommends changes in funding and organization of services.

Donabedian, A. "Evaluating the Quality of Medical Care" in Program Evaluation in the Health Fields. Edited by H. Schulberg and F. Baker. New York: Human Sciences Press, 1969.

A basic survey of methods of evaluating medical care, this article addresses the questions of what to assess, how and where to obtain data, and standards by which to judge data and results.

Donabedian, A. "Needed Research in the Assessment and Monitoring of the Quality of Medical Care." Washington: National Center for Health Services Research, 1978. DHEW Publication No. (PHS) 78-3219.

This document provides brief surveys of areas which need research in the area of quality of care. Prime among these are: definitional studies of quality care, descriptions of prevalent patterns of care, the relationship of structure to process or outcome, basic tools of assessment, and comparative studies.

Eggert, G.M.; Bowlyow, J.E.; and Nichols, C.W. "Gaining Control of the Long Term Care System: First Returns from the ACCESS Experiment." The Gerontologist 20 (1980): 356-363.

The authors describe the design, operation, and utilization (first 24 months) of the ACCESS system. They note a lower rate of increase in acute care backlog days post-ACCESS. They also point to lower rates of cost increase and higher numbers of beneficiaries under this system.

Evaluation of National Institute of Child Health and Development Research Centers. Bethesda, MD: National Institutes of Health, 1978.

A case study evaluation of the research quality, interdisciplinary research, publications, and collaborative efforts in two types of NICHD Centers: Mental Retardation and Population Research. Recommendations deal with center status, evaluation, center procedures, multidisciplinary efforts, and core support. A few copies are available through Mary Madden at the Orkand Corporation, 8630 Fenton St., Silver Spring, Maryland (Phone 301/585-8480). Copies are also available through the National Technical Information Service.

Evaluation Research Society. Standards for Program Evaluation. Washington: Evaluation Research Society, 1980.

This is the first national effort to develop standards for program evaluators. Still in exposure draft form, it will be discussed at the ERS annual meeting in November 1980 and a revised edition will be available in 1981. A few copies of the exposure draft and further information may be obtained by contacting Dr. Keith E. Marvin, Chairman, ERS Standards Committee, c/o Institute for Program Evaluation, General Accounting Office, 441 G Street, N.W., Washington, D.C. 20548 (Phone 202/275-1799).

"Evaluative Research on Social Programs for the Elderly." Report of a Seminar on Evaluative Research sponsored by the Committee on Research and Development. Washington: Government Printing Office, 1977.

This document contains a series of commissioned papers and also reflects the proceedings of two seminars of the Committee on Research and Development of the Gerontological Society. The collection is constituted of articles relevant to evaluation of programs exclusively for the elderly. In general, many of the papers address macro-questions of evaluation, and focus particularly on the context of evaluation within the program, the

health care system and the community. Others look more closely at the micro-level, focusing on conflicting objectives within a program and common objectives among similar programs as variables in the success of evaluation.

Among the collected papers are:

- William Pollak: "Benefit-Cost Analysis in Evaluative Research on Programs for the Elderly."
- John E. O'Brien et al: "Evaluating Coordinated Community Service Systems."
- Paul B. Ginsburg: "Evaluation of Health Care Programs."

An introduction by John O'Brien identifies major questions addressed to the seminars and by the papers.

Falcone, A. Long Term Care Information System: Assessment Process. Lansing: Michigan Office of Services to the Aged, 1978.

A report of a project to develop a long term care information system funded by the Kellogg Foundation. Available from the Michigan Office of Services to the Aging, P.O. Box 30026, 300 East Michigan Ave., Lansing, Michigan 48909.

Ferraro, K.F. "The Aging of Social Programs: A Neglected Variable in Evaluation Research." Paper presented at the 32nd Annual Scientific Meeting of the Gerontological Society, Washington, D.C., November 25-29, 1979.

This paper critically reviews current methodology in program assessment within a framework based on social programs for the elderly. The author points to the need for evaluation measurements to be responsive to programmatic changes over time. Variables associated with aging social programs such as program objectives, organizational development and cohort flow are identified and discussed.

Fink, Arlene and Kosecoff, Jacqueline. An Evaluation Primer. Beverly Hills: Sage Publications, 1980.

This step by step guide to evaluation is designed for human services practitioners and program managers. Available for $9.95 from Sage Publications, P.O. Box 5024, Beverly Hills, California 90210.

General Accounting Office. "The Well-Being of Older People in Cleveland, Ohio." Washington: General Accounting Office, 1977.

This is the major cross-cutting study which examined the well-being of Cleveland residents over 65 and how the services of 23 Federal programs affected them. Location of services and eligibility are highlighted.

Glazer, E.M. and Backer, T.F. "A Clinical Approach to Program Evaluation." Evaluation 1 (1972): 54-60.

Though the published literature on program evaluation suggests that research or service efforts have been assessed utilizing almost exclusively quantitative and objective techniques of measurement, these authors suggest that a clinical approach to program evaluation could be an invaluable alternative in selected instances. They discuss each of the five methods included within the clinical approach to program evaluation: subjective measurement methods, consultation, feedback, debriefing, and participant observation.

Green, L.W. "Evaluation and Measurement: Some Dilemmas for Health Education." American Journal of Public Health 67 (1977): 155-161.

Green has identified seven dilemmas of evaluation and measurement common in health education: rigor of experimental design vs significance or program adaptability, internal validity or 'true' effectiveness vs external validity or feasibility, experimental vs placebo effects, effectiveness vs economy of scale, risk vs payoff, measurement of long-term vs short-term outcomes, and threshold vs diminishing-return levels of expenditure on health education. In discussing how these dichotomies might be resolved, the author has stressed the need to develop a more cumulative data base through measurement standardization, replication of experiments in different settings, and better documentation, reporting, and diffusion of experiences in practice.

Greenberg, J.; Doth, D.; Johnson, A.; and Austin, C. "A Comparative Evaluation of Long Term Case Demonstration Projects: Lessons for Future Inquiry." Will be available through Project Share, P.O. Box 2309, Rockville, Md. 20852 (Phone 301/251-5170).

This overview and analysis of findings from nine demonstration projects includes a survey of major long term care service delivery issues, an analysis of case management model components and problems, and a set of recommendations for development, implementation and monitoring of further projects. The projects covered are: Alternative Health Services (Atlanta), Alternatives to Institutionalization (Massachusetts), Community-Based Care Systems (Washington State), Community Care Organization (Wisconsin), Highland Heights (Massachusetts), Monroe County (New York), On Lok, (San Francisco), Triage (Connecticut) and National 222's.

Hagedorn, H.J.; Beck, K.J.; Neubert, S.F.; and Werlin, S.H. A Working Manual of Simple Program Evaluation Techniques for Community Mental Health Centers. Rockville, Maryland: National Institute on Mental Health, 1976.

This compendium attempts to collect documentation about a variety of program evaluation techniques for new evaluators of community

mental health centers. The book deals with the following conceptual, instrumental, and technological issues in program evaluation

- Contexts and linkages of program evaluation
- Administering program evaluation
- Management information systems
- Needs assessment
- Cost analysis and cost effectiveness
- Impact evaluation
- The effectiveness of consultation and education activities
- Quality assessment

Copies of this document are available from Charles Windle, Ph.D., NIMH Program Evaluation Branch, 5600 Fishers Lane, Room 11-C03, Rockville, Md. 20857 (Phone 301/443-3626).

Hargreaves, W.A. et al, eds. Resource Materials for Community Mental Health Program Evaluation. Vol. I: Elements of Program Evaluation. Vol. II: Needs Assessment and Planning. Vol. III: Management Information Systems for Mental Health Centers. Vol. IV: Evaluating the Effectiveness of Services. Vol. V: A Working People's Guide to the Community Mental Health Program Evaluation Literature. San Francisco: National Institute of Mental Health, 1974-1975.

This comprehensive compendium of resources for center development offers methodology, operationalization and further bibliography. One interesting article: A. Beigel's "Evaluation on a Shoestring: A Suggested Methodology for Evaluation of Community Mental Health Services without Budgetary and Staffing Support."

Hetherington, R.W.; Suttill, J.; Holmlund, C.; and Ivey, D.D. "Evaluation of a Regional Resource Center for Multiply Handicapped Retarded Children." American Journal of Mental Deficiency 83 (1979): 367-379.

Using a "modified before-after control group" design, this article evaluates a mental retardation center on child development, parent and therapist attitudes and knowledge and use of services criteria. Findings revealed significant impact on use and coordination of services.

"How to Plan an Evaluation You'll be Proud Of." How to Evaluate Health Programs. Part I, 3 (January 1980): 1-6. Part 2, 3 (February 1980): 1-6. Part 3, 3 (March 1980): 1-6.

A well-packaged guide to generic program evaluation by Arlene Fink and Jacqueline Kosecoff, this newsletter series can answer basic questions about selection of evaluation parameters, evaluation design, and evaluation instruments. A series of 19 guidelines are presented. Back issues of this newsletter are available for $6.00 per copy from Capitol Publications, 2430 Pennsylvania Ave., N.W., Washington, D.C. 20037.

"How to Prove a Program Works." How to Evaluate Health Programs. 2 (February 1979): 1-6.

This six-page issue of How to highlights tips formulated from the Joint Dissemination Review Panel, a Federally established panel which reviews education programs developed with Federal funds, and decides which ones merit the endorsement of HEW's Education Division. The steps involved in assessing the success of a program involve determining: evidence of change, a statistically significant effect, a medically significant effect, replicability of change, whether the change is valid, and whether the evidence is believable and interpretable.

Hulka, B. "Quality of Ambulatory Care: An Exploration of the Discrepancy Between Explicit Process Criteria and Performance." Washington: National Center for Health Services Research, 1980. DHEW Publication No. (PHS) 80-3244.

This document represents the collaborative efforts of NCHSR and the North Carolina Society of Internal Medicine in a study of peer review in medical record information aimed at identifying the discrepancies between the process criteria for good medical care delivery established by physicians and the quality of care rendered. Explicit and implicit review processes are defined and discussed. The design and findings of the study are detailed. Available from the NCHSR Publications and Information Branch, Room 7-44, 3700 East-West Highway, Hyattsville, Md. 20782 (Phone 301/436-8970).

Interagency Statistical Committee on Long Term Care for the Elderly. Data Coverage of the Functionally Limited Elderly and Inventory of Data Sources on the Functionally Impaired Elderly: A Compendium of the Content and Coverage of Data Sources on Long Term Care for the Elderly. Washington: Interagency Statistical Committee on Long Term Care for the Elderly, 1980.

These volumes are a compendium of data sources on the functionally impaired elderly since 1974 and the recommendations of the interagency committee (including ACTION, CSA, DOA, DOC, DHHS, HUD, DOT, and VA) regarding management of such resources. A limited number of both documents are available from the Special Studies Division, U.S. Office of Management and Budget, New Executive Office Building, Room 7236, Washington, D.C. 20503 (Phone 202/395-3844). Copies will also be available from the National Technical Information Service.

Kane, R.L., Henson, R., and Deniston, O.L. "Program Evaluation: Is It Worth It?" In The Challenge of Community Medicine, pp. 213-233. Edited by R.L. Kane, New York: Springer, 1979.

This article presents an interesting discussion of the issues affecting program evaluation. Special attention is drawn to the relationship between program objectives and effectiveness; program appropriateness and problem definition; program efficiency and costs; program outcome; and program elimination. Definitions and descriptions are provided for each of these areas to enable administrators to implement and evaluate their programs.

Kane, R. and Kane, R. Measurement in the Care of the Elderly: A Guide for Practitioners. Forthcoming 1981.

This compendium will deal with evaluation instruments and their use in aging services. Though a publisher has not been chosen, the volume should be available in 1981.

Kane, R.; Kane, R.; Kleffel, D.; Brook, R.H.; Eby, C.; Goldberg, G.A.; Rubinstein, L.Z.; and Van Ryzin, J. The PSRO and the Nursing Home. Vol. I: An Assessment of PSRO Long Term Care Review. Vol. II: Ten Demonstration Projects in PSRO Long Term Care Review. Santa Monica, California: Rand Corporation, 1979.

Robert Kane and Rosalie Kane and a interdisciplinary team from the Rand Corporation surveyed ten PSRO demonstration projects. Volume I contains background information and comparative information between sites; Volume II contains individual assessments of the ten projects. The study methodology and data system are explicitly described and recommendations are offered. Available from the Rand Corporation, 1700 Main St., Santa Monica, California, 90406.

Keating, P.J. "Aging Management Information System User Documentation for AMIS Reports." University Park, Pennsylvania: Aging Management Information System Project, 1980a.

This document describes the types, organization and numbers of reports produced by the Aging Management Information System, a statewide management information system for services to the elderly in Pennsylvania. Copies are available from the author, AMIS Project, The Pennsylvania State University, 310 Grange Building, University Park, Pennsylvania 16802 (Phone 814/863-1993).

Keating, P.J. "Managing the Pennsylvania Service Delivery Network for the Aging: A Decision-Making Context for the Aging Management Information System (AMIS)." University Park, Pennsylvania: Aging Management Information System Project, 1980b.

This paper summarizes the decision-making framework which determines the design and use of the statewide management information system for services to the elderly in Pennsylvania. The paper is available from the author, AMIS Project, The Pennsylvania State University, 310 Grange Building, University Park, Pennsylvania 16802 (Phone 814/863-1993).

Kleffel, D. and Wilson, E. Evaluation Handbook for Home Health Agencies. Washington: Government Printing Office, 1975.

This handbook represents the efforts of a demonstration utilization review project sponsored by the Bureau of Quality Assurance, Health Services Administration and performed by the California Association for Health Services at Home between 1973 and 1975. The purpose of the project was two-fold: to develop a statistical information model system for utilization review as well as to develop the educational materials and methods to be used in instructing the evaluators in home health agencies.

Knowelden, J. "Information for Community Planning and Coordination of Long Term Care Services." Medical Care (Supplement) 14 (May 1976): 78-84.

This article outlines information needs for long term care coordination; among others, patient disabilities, diagnoses, major caring agencies, family history, housing, financial resources and service requirements are described. Ideally, there should be the capacity to unify information from various sources and over time.

Kraus, M.S. and Howard, K.I. "Program Evaluation in the Public Interest: A New Research Methodology." Community Mental Health Journal 12 (Fall, 1976): 291-300.

The authors define the parties to an evaluation as patients, clients, staff, management and sponsors. They detail the aspects of evaluation in which conflict between these parties can surface, e.g. specification of variables, staffing, or decision-making in consequence of evaluation results.

Landsberg, G.; Neigber, W.D.; Hammer, R.J.; Windle, C.; and Woy, J.R. Evaluation in Practice: A Source Book of Program Evaluations from Mental Health Care Systems in the United States. Washington: National Institutes of Mental Health, 1979/80. (Government Printing Office #(ADM) 80-763.)

This compendium surveys community mental health centers experience in:

- Needs Assessment
- Patterns of Use
- Acceptability, Availability, Accessibility, Awareness
- Client Outcome
- Community Impact
- Indirect Services: Consultation, Education and Interagency Relationships
- Cost, Cost Outcome, Cost Effectiveness

Copies of this document are available from Charles Windle, Ph.D., NIMH Program Evaluation Branch, 5600 Fishers Lane, Room 11-C03, Rockville, Md. 20857 (Phone 301/443-3626).

Lawton, M.P.; Ward, M.; and Yaffe, S. "Indices of health in an aging population." Journal of Gerontology 22 (July 1967): 334-342.

This study uses factors analysis to arrive at conclusions about the intercorrelations of measures of health such as diagnoses, hospitalization, probability of death, treatment by physician, disability, presence of signs, lab test results, pain and discomfort, self-rated health and anxiety over health.

Lohmann, N. "Correlations of life satisfaction, morale, and adjustment measures." The Gerontologist 32 (1977): 73-75.

This study collected data from 259 aged subjects in an attempt to arrive at correlation coefficients of seven measures of life satisfaction, adjustment and morale. A high level of correlation was found.

Long Beach Senior Continuum of Care Evaluation Study. The First Year - July 1979.

This is an evaluation of a continuum of care which included assessment, case management, escort/transportation, day treatment, homemaker services, health services and meals-on-wheels. The report also identifies issues relevant to the program functions in each of these areas. Available from City of Long Beach, Department of Human Resources, Division of Senior Citizen Affairs, 333 West Ocean Blvd., Long Beach, California 90802.

"Long Term Care Data." Report of the Conference on Long Term Health Care Data, Tucson, Arizona, May 12-16, 1975. Medical Care (Supplement): 14(5), 1976.

This special issue of Medical Care covers basic data requirements in long term care; methodological problems of common terminology, measurement, and classification; and development of long term care data systems. Among the significant articles included are:

- Elaine M. Brody: "Basic Data Requirements for Geriatric Institutions and Services"
- Eileen M. Brook: "Problems of Data Collection in Long-Term Health Care"
- Charles D. Flagle: "Common Problems of Current Data Systems for Long Term Care"

"Long Term Health Care: Minimum Data Set." Preliminary Report of the Technical Consultant Panel on the Long-Term Health Care Data Set. Washington: National Center for Health Statistics, 1978.

If it is granted that a major precursor of comparative evaluation is comparable data, this report of a consultant panel on the long term care minimum data set must be considered a landmark document. The Data Set is client-focused and has a sociomedical orientation. It seeks to isolate that set of data which, taken

together, give an accurate assessment of long term care. It is intended for use by institutions, agencies, professional associations, health planners, regulatory agencies and legislators. A minimalist approach has been taken, and feasibility of collection was viewed as the major constraint. The document includes definitions of services and providers.

Maddox, G.L. Assessment and Evaluation Strategies in Aging: People, Populations, and Programs. Proceedings of a National Conference and Related Workshops, Asheville, N.C., May 19-21, 1977. Durham, N.C.: Duke University Center for the Study of Aging and Human Development, 1977.

This volume represents the proceedings of a conference on assessment and evaluation strategies in aging. The conference, approaching evaluation from the perspective of the aged individual as well as in a programmatic context, presented new research, implementation strategies and policy considerations. Workshops on client assessment and professional training in geriatrics were held in conjunction with the conference and these proceedings are included in this volume.

Maddox, G.L. and Dellinger, D.C. "Assessment of Functional Status in a Program Evaluation and Resource Allocation Model." American Academy of Political and Social Science Annals. 438 (July 1978): 59-70.

The authors describe a quasi-experimental evaluation method for comparison of alternative methods of services to the elderly. The strategy rests on a five-dimensional assessment of client function; a method for disaggregation of services; and a "matrix" which relates changes in function to particular aggregates of services.

Makarushka, J.L. and McDonald, R.D. "Informed Consent, Research, and Geriatric Patients: The Responsibility of Institutional Review Committees." The Gerontologist 19 (1974): 61-66.

This article describes how an Institutional Review Committee can be instrumental in protecting the rights of elderly subjects. However, the authors warn against "unnecessarily elaborate" informed consent procedures.

Mangen, D. and Peterson, W., eds. Handbook of Research Instruments in Social Gerontology. Mineapolis: University of Minnesota Press, 1981.

Volume three of this landmark study will contain chapters by:

- Raymond M. Steinberg: "Social Program Tracking and Evaluation"
- Nancy Anderson and Sharon Patton: "The Effectiveness of Long Term Care"
- Jay Greenberg and Ronald Fine: "Evaluating the Cost of Services"

The books will be available in Fall 1981 from University of Minnesota Press, 2037 University Ave., S.E., Minneapolis, Minn. 55414.

Meleis, A.J. and Benner, P. "Process or Product Evaluation." Nursing Outlook 23 (1975): 303-307.

This article begins by defining the difference between process evaluation and product (i.e. outcome) evaluation. The authors offer some guidelines for the selection of one or the other and provide a case-study of an educational effort.

Meredith, J. "Program Evaluation Techniques in the Health Services." American Journal of Public Health 66 (November 1976): 1069-1073.

This article discusses program evaluation in health services within a mental health context. A discussion which raises the issues related to the goals, characteristics and methodologies of program evaluation is accompanied by a comparative analysis of two evaluation models.

Michaels, T.F. and Oetting, E.R. "The Informed Consent Dilemma: An Empirical Approach." The Journal of Social Psychology 109 (1979): 223-230.

This study attempts to relate agreement to participate in research to the amount of stress experienced and benefits perceived by subjects either informed or uninformed. The subjects were introductory psychology students.

National Academy of Sciences. Experiments and Research with Humans: Values in Conflict. Washington: National Academy of Sciences, 1975.

The proceedings of a conference dealing with the questions of what consent is needed and how risks are distributed in evaluation and research studies. An expert panel offers future policy options in requirements for informed consent.

National Association of State Units on Aging and TSDI, Inc. "A National Position Paper on Information Requirement for Managing State and Area Agencies on Aging, Volumes I and II." Washington, D.C.: National Association of State Units on Aging, 1980(a) (Draft).

This position paper draws on a survey of State and Area Agency staff in which major agency functional activities and information needs were identified, in an effort to improve national decision-making on record keeping and reporting mandates. The report also recommends strategies for easing record keeping and reporting burdens as well as the timeliness and accuracy of information regarding a unit's operations. Copies available from NASUA, 1828 L Street, N.W., Washington, D.C. 20036.

National Association of State Units on Aging and TSDI, Inc. "Survey Findings of Aging Unit Information Systems." Washington, D.C.: National Association of State Units on Aging, 1980(b).

This report describes the manual and a computerized information systems used to collect, process and report on client, service, provider and fiscal data of ten State Units on Aging and three Area Agencies on Aging. The report is organized into six areas containing a categorical overview of systems used by Aging Units, and the levels of information collected focusing on environmental characteristics; data collection with a comparative overview of types of information and data collection forms; reports produced and a description of their function; operational processes and the characteristics of computerized information systems. Copies are available from the National Association of State Units on Aging, 1828 L Street, N.W., Washington, D.C. 20036.

National Center for Health Services Research. "Demonstration and Evaluation of a Total Hospital Information System." Hyattsville, Md.: National Center for Health Services Research, 1977. DHEW Publication No. (HRA) 77-3188.

This document summarizes the design and implementation of a prototype hospital management information in California. Patient care benefits and economic impact are also explored. Available from NCHSR, Office of Scientific and Technical Information, 3700 East-West Highway, Room 7-44, Hyattsville, Md. 20782 (Phone 301/436-8970).

National Center for Health Services Research. "Health Survey Research Methods: Second Biennial Conference, Williamsburg, Virginia, May 4-6, 1977." Hyattsville, Md.: National Center for Health Services Research, 1979. DHEW Publication No. (PHS) 79-3207.

These papers and subsequent discussions include:

- Norman Bradburn: "Respondent Burden"
- Bradford Gray: "Developing Issues in the Ethics of Social Research on Health"

Available from NCHSR, 3700 East-West Highway, Hyattsville, Md. 20782.

Nicholas, J.M. "Evaluation Research in Organizational Change Interventions: Considerations and Some Suggestions." Journal of Applied Behavioral Science 15 (1979): 23-40.

Nicholas calls in this article for the simultaneous design of a program and its evaluation. He asserts that early planning of evaluation forces the definition of objectives, impacts and methods of measurement. In Nicholas' opinion, evaluation should be centered around this question: "What do you hope to achieve from this intervention and how will you know if it's successful?" Thus, it becomes the evaluator's task to translate the answers to this question into corresponding measurable criteria. Nicholas

recommends that "evaluations employ multiple criteria to adequately reflect the multiple goals and contributions of a program." Finally, he recommends analytical methods in evaluation be chosen with a view to the usefulness and practicality of the data to the organization. In short, he indicates that evaluation is a program component of equal importance to other program components and must be planned in a way that will optimize the quality of its execution and the utilization of its results.

Parker, B.R. "Statistical and Other Data-Analytic Techniques for the Evaluation Researcher. An Identification, Classification, and Description of Methods and Resources." Journal of Health Politics, Policy and Law 4 (Summer 1979): 273-333.

This survey of evaluation techniques describes a number of statistical and non-statistical evaluation techniques in the hope of increasing their acceptance and use. Among the methods described are analysis of variance, bivariate regression, bivariate correlation, multiple regression, multiple correlation, path/causal analysis, automatic interaction detection, analysis of covariance, multiple discriminant analysis, cohort analysis, ecological inference, and nominal data analysis.

The author has included an annotated bibliography of 122 items dating (for the most part) from the 1970's.

Pastorello, T. Cost-Effectiveness Evaluative Research in Long Term Care. Syracuse: Loretto Geriatric Center, 1980.

This monograph surveys existing methods of cost effectiveness evaluation, offers an alternative method, and describes it application to noninstitution based services. Available from the Loretto Geriatric Center, 700 E. Brighton Ave., Syracuse, New York, 13205. (Phone 315/ 469-5561).

Patton, M.Q. Qualitative Evaluation Methods. Beverly Hills, California: Sage Publications, 1980.

This new book reviews approaches to qualitative evaluation in applied social science. A section on methodology deals with field observation, interviewing, and other research strategies. Data analysis is also examined. Cost is $16.50. Available from Sage Publications, P.O. Box 5024, Beverly Hills, Ca. 90210.

Pederson, K.M. "A proposed model for evaluation studies." Administrative Sciences Quarterly 22 (June 1977): 306-317.

This article presents a framework for evaluation which emphasizes the organizational context in which evaluation impacts decision-making. An overview of evaluation studies, their purposes, development and rationale is provided. A discussion of evaluation and decision-making in an organizational context, based on the assumption of utility maximization, offers further support for the model presented.

Price, J. and Vincent, P. "Program Evaluation: What to Ask Before You Start." Nursing Outlook 24 (February 1976): 84-87.

In this article, the process through which an agency-faculty team carries out an evaluation and defines problems that should have been addressed in advance is described. They outline the following questions:

- Why have we decided to do a program evaluation?
- Is the administration in our agency ready to support us in the program evaluation?
- How might the ongoing study affect what is currently happening in the program?
- What resources do we have for the study?
- What do we really want to study?
- What is the size of the problem we are thinking of studying?
- Are the objectives of the program to be studied clearly stated?
- Are we ready to accept findings from the program evaluation that are different from what we would like to see?
- What should be the design of the study?
- How much effort will it take to obtain the data needed to do our program evaluation?
- What instruments are available to help us measure the variables or outcomes we want to measure?
- Will the data we are planning to collect answer the questions we are asking?

Proceedings of a Conference on How to Evaluate Center Activities. Los Angeles. University Affiliated Program in Mental Retardation, University of Southern California, Forthcoming.

The proceedings of this conference on how to evaluate the missions of the University Affiliated Program (training, direct services, community service) will be available toward the end of 1980. They can be obtained from Neil Goldstein, The University Affiliated Program (USC), Box 54700 Terminal Annex, Los Angeles, California 90054 (Phone 213/669-2300).

Reich, W.T. "Ethical Issues Related to Research Involving Elderly Subjects." The Gerontologist 18 (1978): 326-337.

This article deals cogently with five aspects of ethics in evaluation of and research on elderly subjects. These are:

anti-aging research (the prevention of aging itself); vulnerability to subject selection due to health conditions and resulting subject burden); vulnerability due to impaired competence; consent by proxies for the elderly; and vulnerability of the aged in institutions.

Roos, N.P. "Contrasting Social Experimentation with Retrospective Evaluation: A Health Care Perspective." Public Policy 23 (Spring 1975): 241-257(a).

The author draws a thick line between social experimentation (which incorporates evaluation into the project design) and pilot and demonstration projects (which incorporate evaluation only as a retrospective activity). The two approaches are contrasted on the criteria of internal validity, external validity, and cost.

Roos, N.P. "Evaluating Health Programs: Where Do We Find the Data?" Journal of Community Health 1 (Spring, 1975): 39-50(b).

This article argues that new health initiatives are being implemented before an evaluation methodology has been decided upon. For this reason, retrospective evaluation utilizing pre-existing administrative data is the rule rather than the exception. The author discusses the limitations of this type of data.

Ross, J.; Boruch, R.F.; and Cecil, J.S. Solutions to Ethical and Legal Problems in Applied Social Research. New York: Academic Press, 1981.

This forthcoming book will deal with include the proceedings of a 1979 Northwestern University conference on ethical and legal problems. It will deal with the ethical problems of randomization and of informed consent in randomized evaluation. It also deals with the regulation of research and evaluation ethics.

Rossman, B. et al. "Awareness, use and consequences of evaluation data in a community mental health center." Community Mental Health Journal 15 (1979): 7-16.

Studying the utilization of program evaluation data by community mental health center managers and clinicians has been a major aspect of the effort of the Mental Health Systems Evaluation Project of the Northwest Denver Community Health Center. The objectives of the effort were to assess the impact of program evaluation feedback in the community health center itself and to examine variables which influenced the impact. The authors have found that when program evaluation is presented simply and personally to the manager most closely involved with the service at issue, the impact is more far-reaching.

Rutman, L., ed. Evaluation Research Methods: A Basic Guide. Beverly Hills, California: Sage Publications, 1977.

A basic handbook of methodology, this book also includes Rutman's chapter on planning an evaluation study.

Schulberg, H.C. and Baker, F., eds. Program Evaluation in the Health Fields. New York: Human Sciences Press, 1969.

The two volumes of this collection contain articles such as:

- A. Donabedian: "Evaluating the Quality of Medical Care"
- C. Atkisson and W. Hargreaves: "A conceptual model for program evaluation in health organizations"
- A. Broskowski: "Management Information Systems for Planning and Evaluation in Human Services"

Schulberg, H.C. and Perloff, R. "Academia and the Training of Human Service Delivery Program Evaluators." American Psychologist 34 (March 1979): 247-254.

This article considers the need for trained program evaluators, and deals at length with the knowledge and skills required to be an effective program evaluator. The authors focus on mental health services, but note that the same conclusions are true of other areas.

Schultz, R. and Hanusa, B.H. "Long Term Effects of Control and Predictability - Enhancing Interventions: Findings and Ethical Issues." Journal of Personality and Social Psychology 36 (1978): 1194-1201.

This article questions the ethics of termination of interventions with the elderly on the basis of data that shows that elderly subjects exposed to a control and predictability enhancing intervention benefitted initially but declined suddenly when the intervention was terminated.

Selig, A.L. "Conceptual Framework for Evaluating Human Service Delivery Systems." American Journal of Orthopsychiatry 46 (January 1976): 140-153.

This paper integrates the relevant literature (a bibliography of 56 items) into a matrix which suggests variables at eight levels of function (values, data collection, goals/objectives, measurement criteria, program planning activity, program operation assessment, and feedback) and on three levels of analysis (strategic, management and operational).

Shortell, S.M. and Richardson, W.C. Health Program Evaluation. St. Louis: Mosby, 1978.

This is a basic text of evaluation with a focus on the special features and problems of its application to health programs.

Steinberg, R. et al. Handbook of Guidelines and Models for Development, Implementation and Evaluation of Case Coordination Programs for Elderly, (in press).

This will in all probability be a bible of guidelines that have been used to formulate case coordination programs. Evaluation criteria to be included deal with comprehensiveness of problem identification, service utilization, continuity, client satisfaction, timelines, and interagency contact among others.

Stockdill, J.W. et al. The Politics of Program Evaluation: The Mental Health Experience." Hospital and Community Psychiatry 27 (September 1976): 650-652.

Using the community mental health center program as an example, the authors point out that evaluation activities take on a political character by virtue of their impact on funding decisions. Thus, in their opinion, evaluators need skills in organization and group process as well as technical and methodological expertise.

Struening, E.L. and Guttentag, M., eds. Handbook of Evaluation Research. Beverly Hills: Sage, 1975.

These editors have taken an exhaustive approach to the collection of previously published and in many cases unpublished landmark articles by virtually every expert in the field. In Volume I, they deal equally with the theory, design, and the implementation of evaluation, with policy and strategy of evaluation, and with measurement, data collection and data analysis. Volume 2 focuses on evaluation ethics, on cost-benefit analysis, and on the social program area which is perhaps most developed in the area of evaluation: mental health. Among the articles included are:

- Carol Weiss: "Evaluation Research in the Political Context."
- H.R. Davis and S.E. Salasin: "The Utilization of Evaluation."
- Lee Gurel: "The Human Side of Evaluating Human Service Programs: Problems and Prospects."
- Jerome Rothenberg: "Cost-Benefit Analysis: A Methodological Exposition."

Suchman, E.A. Evaluative Research: Principles and Practice in Public Service and Social Action Programs. New York: Russell Sage Foundation, 1967.

A landmark document in the field of program evaluation, Suchman's book systematically considers type of evaluation, evaluation design, the measurement of effects (reliability and validity) and the administration of evaluation.

Tien, J.M. "Toward a Systematic Approach to Program Evaluation Design." IEEE: Transactions on Systems, Man and Cybernetics 9 (September 1979): 494-515.

This paper provides a framework which links program characteristics to evaluation design elements. Design elements are categorized into five components: test hypotheses, selection scheme, measures framework, measurement methods, and analytic techniques. An evaluation taxonomy is proposed which involves various permutations of the input, process, outcome triad. The author systematically reviews a range of threats to validity.

Turner, H.D. "Principles and Methods of Program Evaluation." International Development Review 18 (1976): 20-30.

This author defines the purposes of program evaluation and the kinds of evaluation. He asserts that the primary precondition of evaluation should be to define the causal linkages between inputs, outputs, purposes and goals. The relative merits of in-house and outside responsibility for evaluation are also discussed.

U.S. Department of Health, Education and Welfare. An Assessment of the National Area Health Education Center Program. Washington: Health Resources Administration, Bureau of Health Manpower, 1980. DHEW Publication (HRA) 80-33.

This document reviews the concept, development and structure of AHECs and attempts an assessment of the impact of AHECs on distribution of health professionals and access to care/quality of care.

U.S. Department of Health, Education and Welfare. "Primary Care Effectiveness: An Approach to Clinical Quality Assurance in BCHS Programs and Projects." Rockville, Md.: Bureau of Community Health Services, 1980.

This document reviews the basic components of a quality assurance system: health care plans, tracking systems, and quality review procedures. The examples offered pertain largely to pediatric and maternal care.

Wales, J.B. and Treybig, D.L. "Recent Legislative Trends Toward Protection of Human Subjects: Implications for Gerontologists." The Gerontologist 18 (1978): 244-249.

This article reviews recent legislation and poses crucial questions in need of investigation in the future. For example: "Are elderly subjects exposed to significantly greater risks in research than their younger counterparts?"

Warheit, G.J.; Bell, R.A.; and Schwab, J.J. Needs Assessment Approaches: Concepts and Methods. Washington: National Institute of Mental Health, 1977.

Through this thorough and basic manual about how to do needs assessment, the authors offer concrete ideas about planning the assessment and selecting the assessment approach (e.g. the Key Informant Approach, the Community Forum Approach, the Roles-under-Treatment Approach, the Social Indicators Approach and the Survey Approach). Sampling, data gathering and research instruments are also discussed. Copies available from Dr. Charles Windle, NIMH Program Evaluation Branch, 5600 Fishers Lane, Room 11-C03, Rockville, Md. 20857.

Watts, C.A.; Jackson, M.; and LoGerfo, J.P. "Cost Effectiveness Analysis: Some Problems of Implementation." Medical Care 17 (April 1979): 430-434.

Society has demanded that health care services be provided in an accountable and cost effective manner. Problems arise since the values of 'life' or 'health' are difficult to reduce to a monetary or any other unit measure of worth. Watts et al, have described a process of cost effectiveness analysis, using discounting, but advise that caution be exercised in its use, as it, like most other methods of cost-benefit analysis, can easily be misconstrued.

Weiss, C.H. Evaluation Research: Methods of Assessing Program Effectiveness. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

This small book is most often mentioned as a comprehensive, creative and coherent approach to program evaluation in social action progams. Weiss examines the purposes, design and context of evaluation, as well as the utilization of evaluation results. The author underlines the ultimate purpose of evaluation: to contribute to program decision-making. The book includes a 352-item bibliography.

Windle, C. "A Crisis for Program Evaluation: An Embarrassment of Opportunity." Rhode Island Medical Journal 59 (1976): 503-4, 510-16.

The author points out that utilization of research results by program managers is low, and calls for (1) the involvement of managers in evaluation design; (2) ethical standards of evaluation reporting and (3) positive incentives for program use of evaluation information. Reprints available from the author, NIMH Program Evaluation Branch, 5600 Fishers Lane, Room 11-C03, Rockville, Md. 20857.

Windle, C. and Neigher, W. "Ethical Problems in Evaluation: Advice for Trapped Evaluators." Evaluation and Program Planning 1 (1978): 97-107.

Windle, C. and Neigher, W. "Ethical Problems in Evaluation: Advice for Trapped Evaluators." Evaluation and Program Planning 1 (1978): 97-107.

This article describes three models of evaluation (Amelioration Model, Accountability Model, Advocacy Model) and specifies how ethical/political conflicts surface in each. The authors offer seven strategies which evaluators could use to prevent or solve ethical/political conflicts.

Windle, C. and Woy, R.J. "When to Apply Various Program Evaluation Approaches." Evaluation 3 (1977): 25-37.

Five approaches to evaluation are reviewed, especially in their application to community mental health centers. The five approaches are: peer review, self-evaluation, citizen review, external monitoring and external evaluation. These approaches are compared on the following criteria: agents, main focus of analysis, main types of evaluation criteria and main use of evaluation results.

Zemach, R. "Program Evaluation and System Control." American Journal of Public Health 63 (July 1973): 607-609.

This paper critically examines Shulberg and Baker's "system model" of evaluation, with the context of control theory and the evaluation mechanism as part of the total system. The author also provides a discussion of evaluation's purpose in programmatic structure and development.

Zusman, J. and Wurster, C.R. Program Evaluation: Alcohol, Drug Abuse and Mental Health Services. Lexington, Massachusetts: Heath, 1975.

Many of the articles in this collection are relevant beyond the fields denoted by the title. Among others, the book includes:

- E.B. Gold: "Quick Reference Outline of Recent Evaluation Work"
- W.A. Hargreaves et al: "Current Applications of Evaluation"
- B.J. Morrison and M. Sundel: "Development of a Community Assessment Strategy for Program Evaluation in a Comprehensive Human Services Delivery system"
- P. Sainsbury: "Comprehensive Approach to Evaluation and Community Research"
- W.G. Smith: "The Ideal and the Real: Practical Approaches and Techniques in Evaluation"

Additional Resources

I. Resource People

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II. Journals

Evaluation and Change (formerly Evaluation)

Available to those associated with community mental health agencies at no charge. Back issues available to others on a per issue cost basis; cost varies with the issue but all back issues (to 1972) are available. Copies may be obtained through the Program Evaluation Project, 501 Park Avenue South, Minneapolis, Minnesota 55415 (Telephone 612-348-7812).

New Directions for Program Evaluation

This is a monograph series published by Jossey-Bass in San Francisco. Single issues are available for $6.95; all back issues are available. A subscription for four issues is $18.00 for individuals and $30.00 for libraries. The following issues are available.

#1: Anderson, S. and Coles, C. (eds.) "Exploring Purposes and Dimensions." (1978)

#2: Rentz, C. and Rentz, R. (eds.) "Evaluating Federally Sponsored Programs." (1978)

#3: Grant, D.E. (ed.) "Monitoring Ongoing Programs. (1978)

#4: Boruch, R. (ed.) Secondary analysis. (1978)

#5: Sechrest, L. (ed.) Training Program Evaluators. (1980)

#6: Perloff, R. and Perloff, E. (eds.) Values, ethics and standards in evaluation. (1980)

#7: Ball, S. (ed.) Assessing and Interpreting Program Outcomes. (1980)

#8: Loveland, E. (ed.) Measuring the Hard to Measure. (Forthcoming, 1980).

How to Evaluate Educational Programs.

A newsletter edited by Arlene Fink and Jacqueline Kosecoff. Available through Capitol Publications, 2430 Pennsylvania Ave., N.W., Washington, D.C. 20037. A subscription which includes a binder with all back issues is $55.

How to Evaluate Health Programs

A newsletter previously edited by Arlene Fink and Jacqueline Kosecoff. Back issues are available from Capitol Publications, 2430 Pennsylvania Ave., N.W., Washington, D.C. 20037. All back issues are available; the cost is $6.00 per issue.

Evaluation Review: A Journal of Applied Social Research (formerly Evaluation Quarterly)

Available from Sage Publications, P.O. Box 5024, Beverly Hills, California 90210. Now published six times yearly, subscriptions to this journal are $20.00 for individuals, $40.00 for libraries. Back issues cost $5.00 for individuals, $8.50 for libraries.

III. Bibliographies

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EVALUATION	Evaluation in General	Methodological Problems	Political/Ethical/Legal Moral Problems	Operational Issues	Applications	Centers Eval.
ABDELLAH				X		
ALPANDER, 1974		X			X	
ANGRIST, 1975	X	X				
APPLEBAUM, 1980					X	
BARBER, 1980			X			
BECK, 1979		X				
BERK/ROSSI, 1976			X			
BERKOWITZ, 1978			X			
BLACKWELL, 1977					X	
BLANTON/ALLEY, 1978				X		
BELNKNER et al, 1971					X	
BLOOM, 1975				X		
BLUM, 1974	X					
BOUCH et al, 1979		X	X			
BOWER/DEGASPERIS, 1978			X			
BRITAN, 1979		X				
BRITAN, 1978		X				
BRODY/KRAILS, 1978		X				
BROOK/AVERY, 1977		X				
CAIN/HOLLISTER, 1972	X	X				
CALSYN et al, 1977		X				
CANCER CARE, 1973					X	

EVALUATION	Evaluation in General	Methodological Problems	Political/Ethical/Legal Moral Problems	Operational Issues	Applications	Centers Eval.
CAPLAN, 1968	X	X			X	
CARO, 1977	X	X				
CARTER et al, 1978						X
CHAFETZ, 1974				X	X	
CHEN/YANG, 1979		X				
COHEN , 1978			X			
COLORADO PSRO, 1978		X			X	
CONLY, 1977					X	
COURSEY et al, 1977	X	X		X	X	
COWEN, 1978		X		X		
DENSEN, 1976		X			X	
DES JARLAIS, 1978					X	
DOHERTY/HICKS, 1977		X				
DOHERTY et al, 1978					X	
DONABEDIAN,	X	X				
DONABEDIAN, 1978	X					
EGGERT, 1980					X	
EVALUATION, 1978					X	
ERS, 1980			X			
EVALUATIVE RESEARCH 1977	X	X				
FALCONE, 1978				X		
FERRARO, 1979		X				

EVALUATION	Evaluation in General	Methodological Problems	Political/Ethical/Legal Moral Problems	Operational Issues	Applications	Centers Eval.
FINK/KOSECOFF, 1980	X	X		X		
GAO, 1977					X	
GLAZER/BLACKER, 1972		X				
GREEN, 1977		X				
GREENBERG et al, 1980					X	
HAGEDORN, 1976	X	X		X		
HARGREAVES, 1974-5	X					
HETHERINGTON et al, 1979		X			X	
HOW TO PLAN, 1980		X				
HOW TO PROVE, 1979		X				
HULKA, 1980					X	
INTERAGENCY INVENTORY 1980				X		
KANE, et al, 1979		X		X		
KANE/KANE, 1981		X				
KANE et al, 1979					X	
KEATING, 1980a						
KEATING, 1980b						
KLEFFEL/WILSON, 1975					X	
KNOWELDEN, 1976				X		
KRAUS/HOWARD, 1976			X			
LANDSBERG et al, 1980	X	X			X	

EVALUATION	Evaluation in General	Methodological Problems	Political/Ethical/Legal Moral Problems	Operational Issues	Applications	Centers Eval.
LAWTON et al, 1967		X		X		
LEADER/NEUWIRTH, 1978		X				
LOHMANN, 1977		X		X		
LONG BEACH, 1979					X	
LONG TERM CARE DATA, 1976		X		X		
LONG TERM HEALTH CARE, 1978				X		
MADDOX, 1977	X	X				
MADDOX/DELLINGER, 1978		X			X	
MAKARUSHKA/MCDONALD, 1979			X			
MANGAN/PETERSON, 1981		X		X		
MELEIS/BRENNER, 1975		X				
MEREDITH, 1976	X	X			X	
MICHAELS/OETTING, 1979			X			
NATIONAL ACADEMY OF SCIENCES, 1975			X			
NASUA, 1979				X		
NATIONAL CENTER FOR HEALTH SERVICES RESEARCH, 1977b				X	X	
NATIONAL CENTER FOR HEALTH SERVICES RESEARCH, 1979		X		X		
NATIONAL CENTER FOR HEALTH SERVICES RESEARCH, 1977		X				
NICHOLAS, 1979	X					

EVALUATION	Evaluation in General	Methodological Problems	Political/Ethical/Legal Moral Problems	Operational Issues	Applications	Centers Eval.
PARKER, 1979				X		
PASTORELLO, 1980		X				
PATTON, 1980	X	X		X		
PEDERSON, 1977		X				
PRICE, VINCENT, 1976	X	X				
PROCEEDINGS, 1980					X	
REICH, 1978			X			
ROOS, 1975a	X	X				
ROOS, 1975b		X				
ROSS et al, 1981			X			
ROSS et al, 1979					X	
RUTMAN, 1977	X					
SCHULBERG/BAKER, 1979	X					
SCHULBERG/PERLOFF, 1979		X				
SCHULTZ/HANUSA, 1978			X			
SELIG, 1976		X				
SHORTELL/RICHARDSON, 1978	X					
STEINBERG et al,					X	
STOCKDILL/SHARFSTEIN, 1976			X			
STRUENING/GUTTENTAG, 1975	X	X				
SUCHMAN, 1967	X	X		X		

EVALUATION	Evaluation in General	Methodological Problems	Political/Ethical/Legal Moral Problems	Operational Issues	Applications	Centers Eval.
TIEN, 1979	X	X		X		
TURNER, 1976	X	X				
USDHEW, ASSESSMENT, 1980					X	
USDHEW, PRIMARY CARE, 1980				X		
WALES/TREYBIG, 1978			X			
WARHEIT et al, 1977	X	X		X		
WATTS et al, 1979		X				
WEISS, 1972	X	X		X		
WINDLE, 1976	X	X				
WINDLE/NEIGHER, 1978			X			
WINDLE/WAY, 1977		X				
ZEMACH, 1973		X				
ZUSMAN/WURSTER, 1975	X	X		X	X	

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